

Supported by



Co-funded by the
European Union

Deliverable 2.1. Report on the assessment & validation of needs for Cu-oriented education chain selected groups

Annex 2 ONLINE SURVEY RESULTS

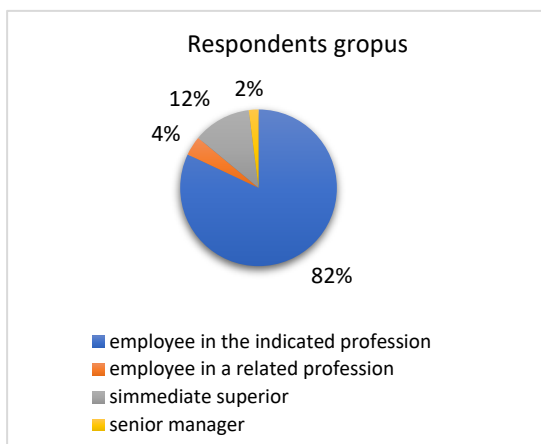
CONTENTS

ONLINE SURVEY RESULTS FOR COMPETENCE PROFILE MINER SELF-PROPELLED MINING MACHINE OPERATOR	2
GENERAL RESULTS	2
DETAILED RESULTS.....	5
ONLINE SURVEY RESULTS FOR THE COMPETENCE PROFILE SOLID MINERAL PROCESSING TECHNICIAN	19
GENERAL RESULTS	19
DETAILED RESULTS.....	23
ONLINE SURVEY RESULTS FOR THE COMPETENCE PROFILE METALLURGICAL ENGINEER – NON FERROUS METALS	42
GENERAL RESULTS	42
DETAILED RESULTS.....	47
ONLINE SURVEY RESULTS FOR THE COMPETENCE PROFILE MINING ENGINEER (SUPERVISOR).....	68
GENERAL RESULTS	68
DETAILED RESULTS.....	72
ONLINE SURVEY RESULTS FOR THE COMPETENCE PROFILE MINING GEOLOGIST	86
GENERAL RESULTS	86
DETAILED RESULTS.....	90

ONLINE SURVEY RESULTS FOR COMPETENCE PROFILE MINER SELF-PROPELLED MINING MACHINE OPERATOR

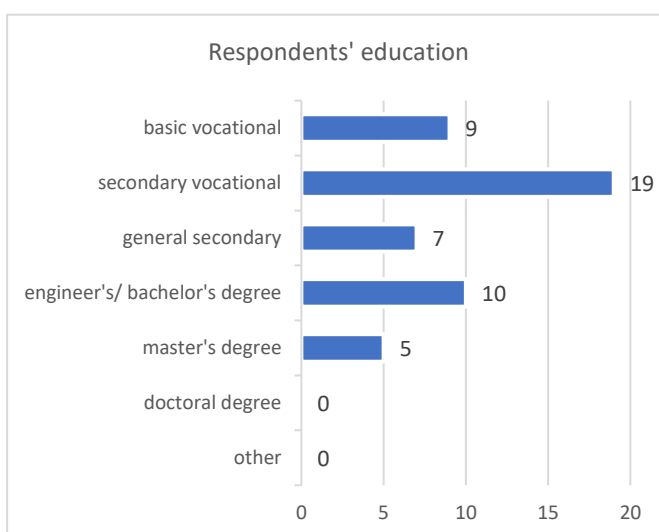
GENERAL RESULTS

50 respondents took part in the survey, divided into following groups:



	Numbers	%
employee in the indicated profession	41	82
employee in a related profession	2	4
immediate superior	6	12
senior manager	1	2
other	0	0
	50	100

The cross-section of respondents in terms of education is as follows:



	Numbers	%
Basic vocational	9	18
Secondary vocational	19	38
General secondary	7	14
Engineer's/ bachelor's	10	20
Master's degree	5	10
Doctoral degree	0	0
other	0	0
	50	100

Assessment of professional skills and social competence

The respondent, who is an employee of the surveyed profession, was asked to assign the level of individual professional and social skills characterizing this profession, observed in the respondent's opinion in himself and in his co-workers.

The respondent, who is the supervisor of employees performing the surveyed profession, was asked to express a similar (average) opinion in relation to the employees he manages.

In the survey, respondents rated on a 5-point Likert scale:

1. Very low
 2. Low
 3. Satisfactory
 4. High
 5. Very high
-
0. Not applicable

If the respondent could not take a position on a given issue, it was possible to select the "Not applicable" option. The "N/A" option has a weight of "0" and was not counted towards the average of the results.

The results for the competence profile of Miner Self-Propelled Mining Machine Operator expressed as the average of the grade were ranked below in ascending order.

Table. Miner Self-Propelled Mining Machine Operator – results of the competency gap survey in the area of social skills and competences (n=50).

ASSESSMENT OF PROFESSIONAL SKILLS	Average score (n=50)
Maintains the operating book of the self-propelled mining machine on an ongoing basis	3,9
Applies the environmental regulations and rules applicable to operators of a self-propelled mining machinery	4,0
Reports self-propelled mining machinery for inspection and maintenance work	4,0
Checks the correct operation of the electrical system of a self-propelled mining machine	4,0
Checks the correct operation of all electrically powered equipment on a self-propelled mining machine	4,0
Performs the commissioning of a self-propelled mining machine including checking the correct operation of the starter	4,0
Applies health, safety and fire regulations and rules applicable to operators of a self-propelled mining machinery	4,1
Distinguishes between natural and technological hazards in the position of a self-propelled	4,2

mining machine operator	
Checks the correct operation of the hydraulic system of a self-propelled mining machine.	4,2
Checks and interprets the indicators on the dashboard and pressure gauges in the operator's cab	4,2
Checks and operates the fire extinguishing system of a self-propelled mining machine	4,2
Performs minor repairs to self-propelled mining machinery	4,3
Performs shift and periodic maintenance on self-propelled mining machines	4,4
Communicates the machine malfunction to his supervisor (foreman)	4,4
Steers and controls self-propelled mining machinery	4,5
Tests the operability of a self-propelled mining machine's lighting intended to illuminate the path of travel and the working area of the machine	4,5
Tests the operability of a self-propelled mining machine's audible signal used when navigating intersections in underground mines	4,5
Secures the damaged machine and informs the supervisor (foreman) if the machine needs to be repaired in the repair chamber or if the factory service needs to be called	4,5
ASSESSMENT OF SOCIAL COMPETENCE	
Applies stress management techniques	3,9
Applies problem-solving methods and techniques	3,9
Modifies behaviour taking into account other team members	3,9
Expresses emotions, feelings and views in accordance with generally accepted norms and rules of social intercourse	4,0
Applies the principles of interpersonal communication	4,0
Carries out a self-assessment of the quality of the work produced	4,1
Suggests ways to solve problems related to the performance of professional tasks under unpredictable conditions	4,1
Engages in the implementation of joint team activities	4,1
Is willing to share knowledge	4,1
Accepts responsibility for professional information entrusted	4,2
Respects confidentiality rules associated with the profession and the workplace	4,2
Plans the task responsibly	4,3
Anticipates the consequences of improper work activities at the workplace, including the handling of hazardous substances, and the improper operation of machinery and equipment at the workplace	4,3
Takes responsibility for actions taken	4,4

Findings

Based on the results of the competence gap survey among selected groups of employees in the copper sector (competency profile: Miner Self-Propelled Mining Machine Operator), the following are the professional skills and social competence whose level in the opinion of the respondents is currently the lowest (a unified threshold of the average value of the assessment of 4.0 was adopted).

It is justified to include employees in targeted educational activities developing the following skills:

PROFESSIONAL SKILLS

- Maintains the operating book of the self-propelled mining machine on an ongoing basis.

SOCIAL COMPETENCE

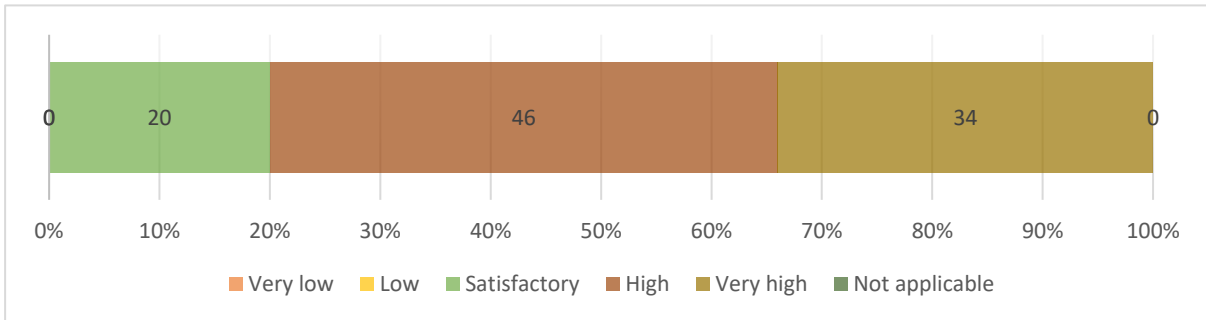
- Applies stress management techniques.
- Applies problem-solving methods and techniques.
- Modifies behaviour taking into account other team members.

See details in the next section

DETAILED RESULTS

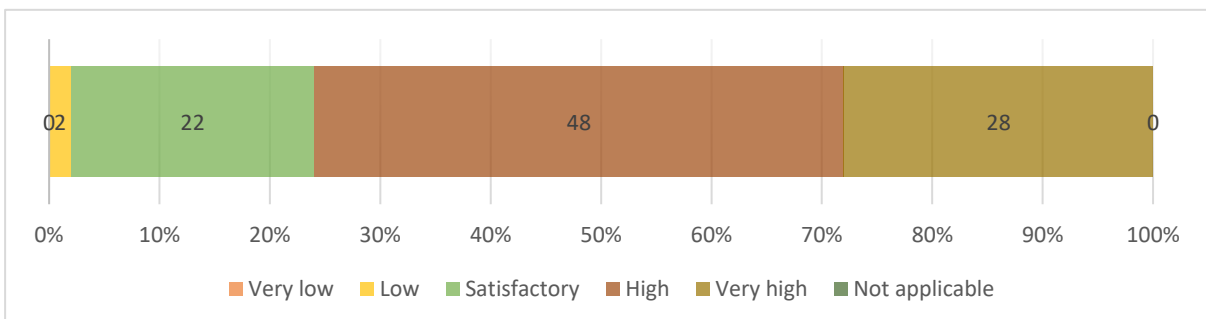
Assessment of professional skills

1. Applies health, safety and fire regulations and rules applicable to operators of a self-propelled mining machinery.



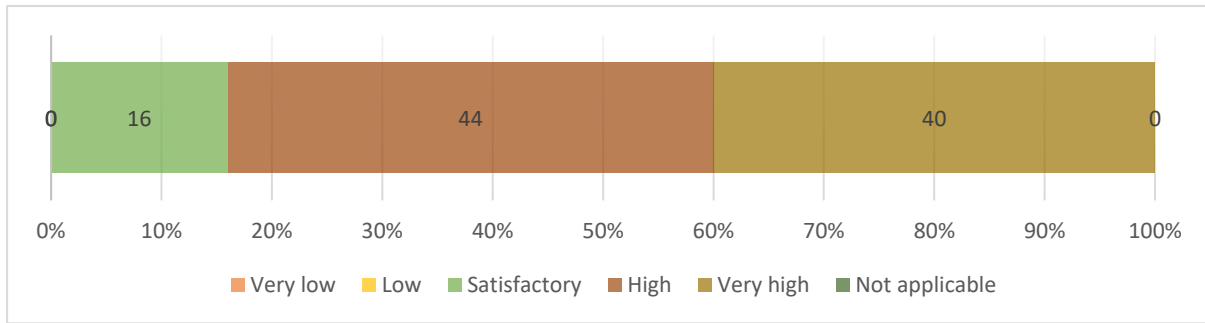
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	0	10	23	17	0	4,1
RESULTS [%]	0	0	20	46	34	0	

2. Applies the environmental regulations and rules applicable to operators of a self-propelled mining machinery.



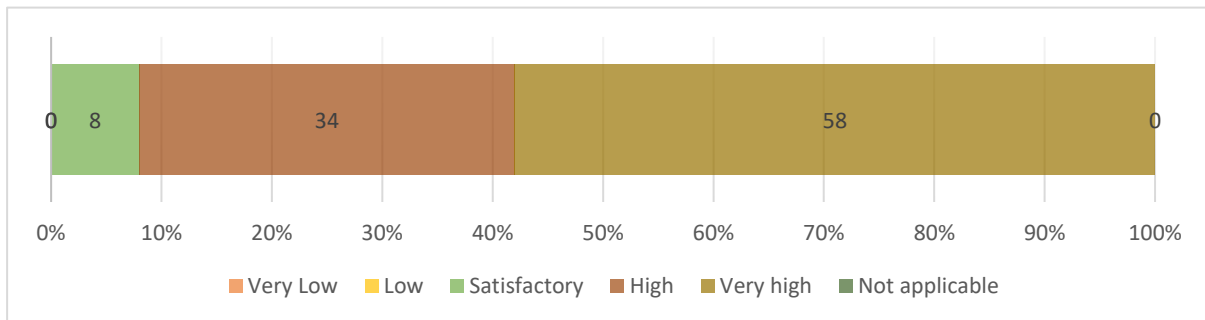
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	1	11	24	14	0	4,0
RESULTS [%]	0	2	22	48	28	0	

3. Distinguishes between natural and technological hazards in the position of a self-propelled mining machine operator.



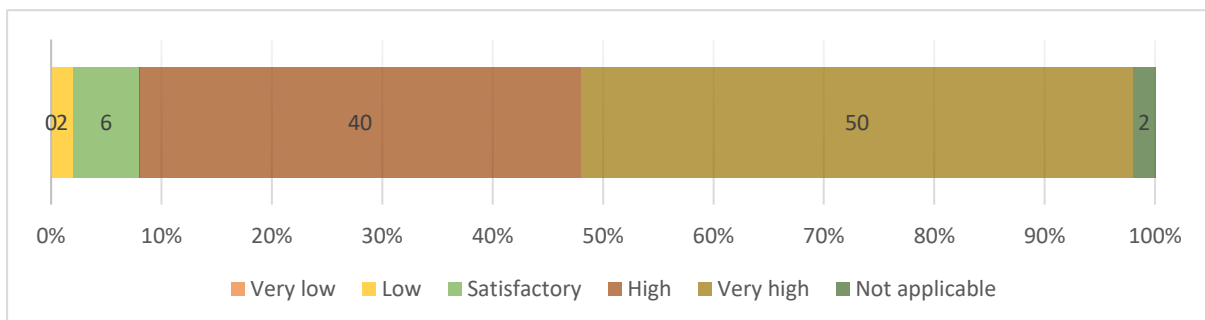
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	0	8	22	20	0	4,2
RESULTS [%]	0	0	16	44	40	0	

4. Steers and controls self-propelled mining machinery.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	0	4	17	29	0	4,5
RESULTS [%]	0	0	8	34	58	0	

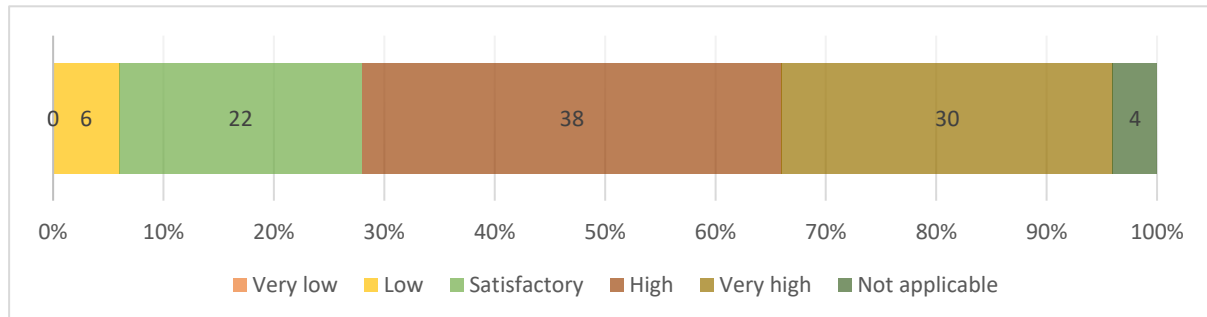
5. Performs shift and periodic maintenance on self-propelled mining machines.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	0	0	0	0	0	4,5
RESULTS [%]	0	0	0	0	0	0	

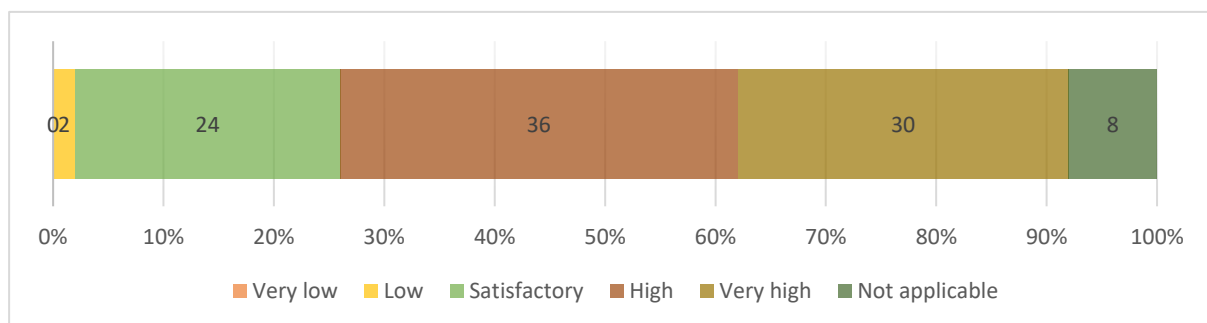
RESULTS [No]	0	1	3	20	25	1	4,4
RESULTS [%]	0	2	6	40	50	2	

6. Reports self-propelled mining machinery for inspection and maintenance work.



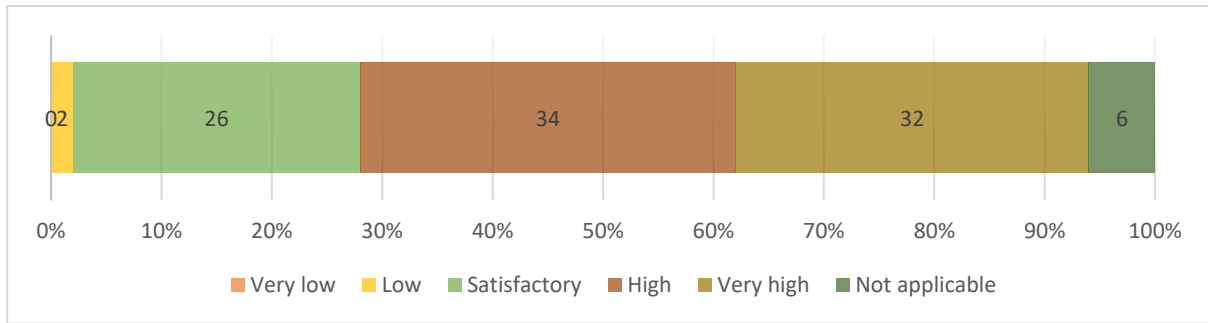
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	3	11	19	15	2	4,0
RESULTS [%]	0	6	22	38	30	4	

7. Checks the correct operation of the electrical system of a self-propelled mining machine.



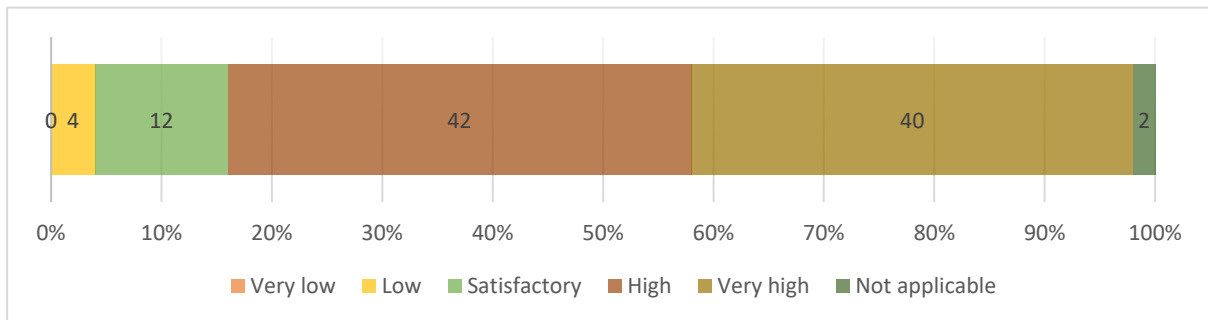
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	1	12	18	15	4	4,0
RESULTS [%]	0	2	24	36	30	8	

8. Checks the correct operation of all electrically powered equipment on a self-propelled mining machine.



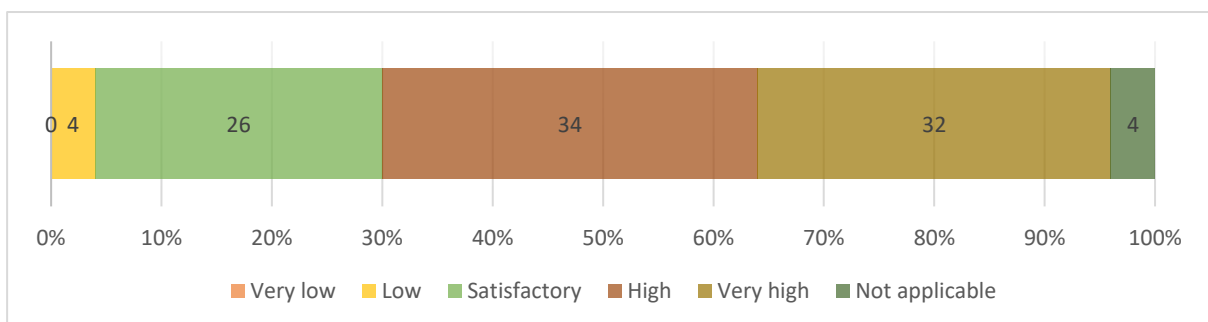
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	1	13	17	16	3	4,0
RESULTS [%]	0	2	26	34	32	6	

9. Checks the correct operation of the hydraulic system of a self-propelled mining machine.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	2	6	21	20	1	4,2
RESULTS [%]	0	4	12	42	40	2	

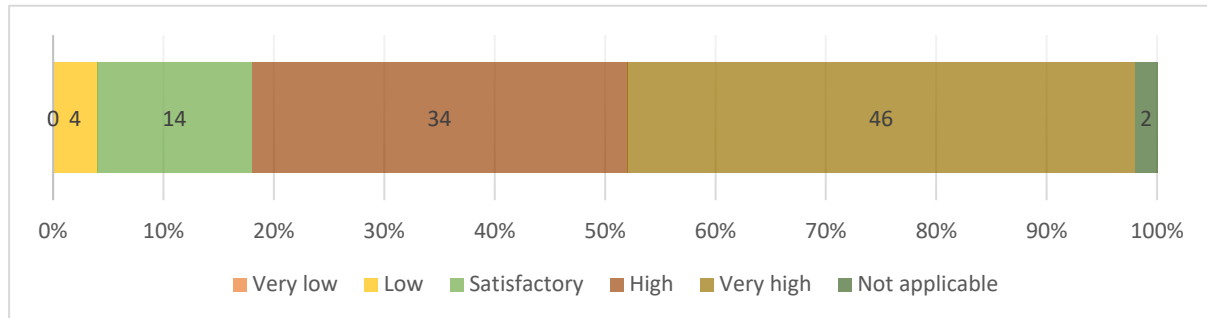
10. Performs the commissioning of a self-propelled mining machine including checking the correct operation of the starter.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
--------	----------	-----	--------------	------	-----------	----------------	---------

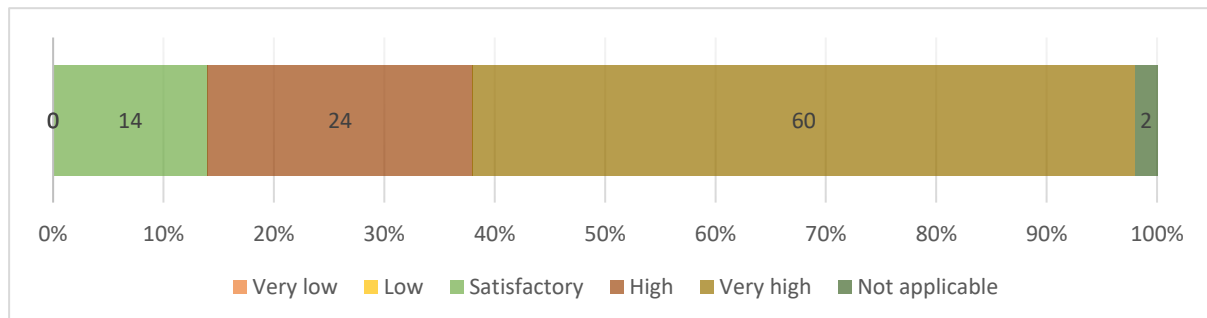
	1	2	3	4	5	0	4,0
RESULTS [No]	0	2	13	17	16	2	
RESULTS [%]	0	4	26	34	32	4	

11. Checks and interprets the indicators on the dashboard and pressure gauges in the operator's cab.



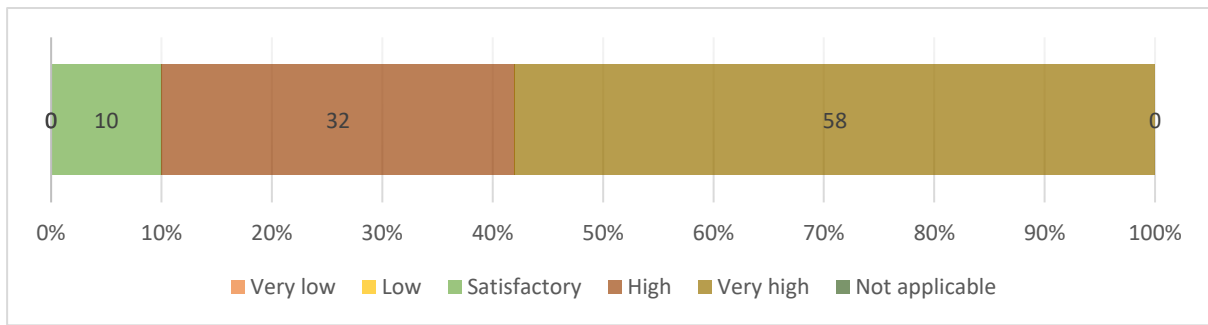
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	2	7	17	23	1	4,2
RESULTS [%]	0	4	14	34	46	2	

12. Tests the operability of a self-propelled mining machine's lighting intended to illuminate the path of travel and the working area of the machine.



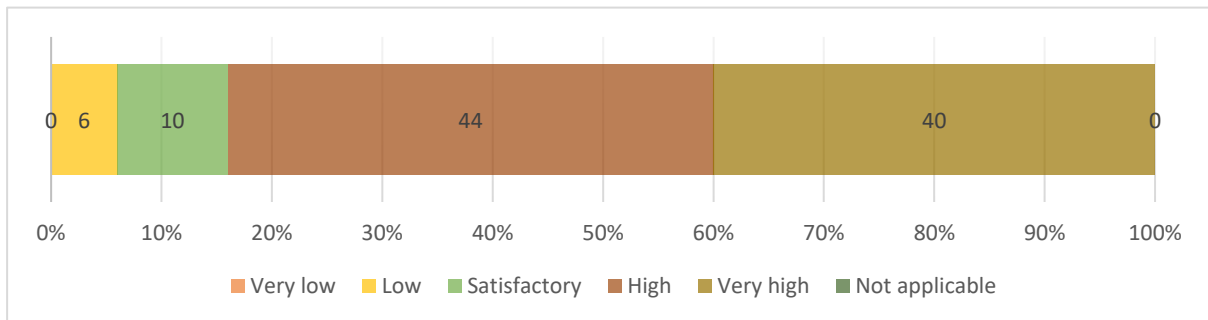
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	0	7	12	30	1	4,5
RESULTS [%]	0	0	14	24	60	2	

13. Tests the operability of a self-propelled mining machine's audible signal used when navigating intersections in underground mines.



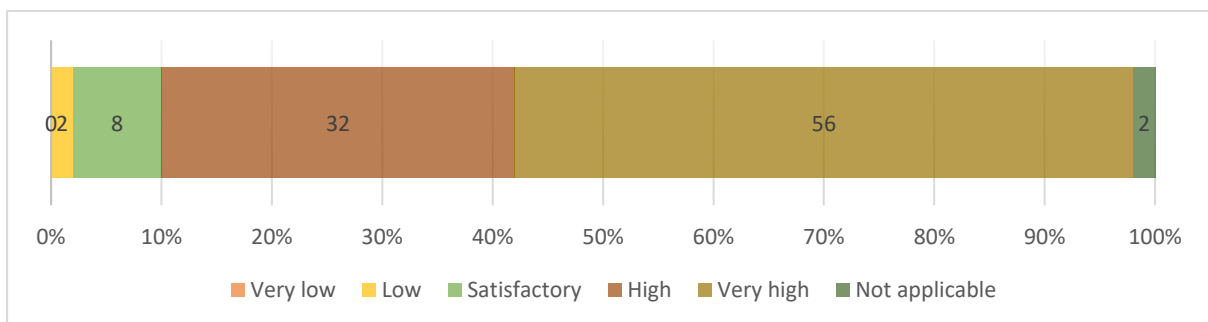
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	0	5	16	29	0	4,5
RESULTS [%]	0	0	10	32	58	0	

14. Checks and operates the fire extinguishing system of a self-propelled mining machine.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	3	5	22	20	0	4,2
RESULTS [%]	0	6	10	44	40	0	

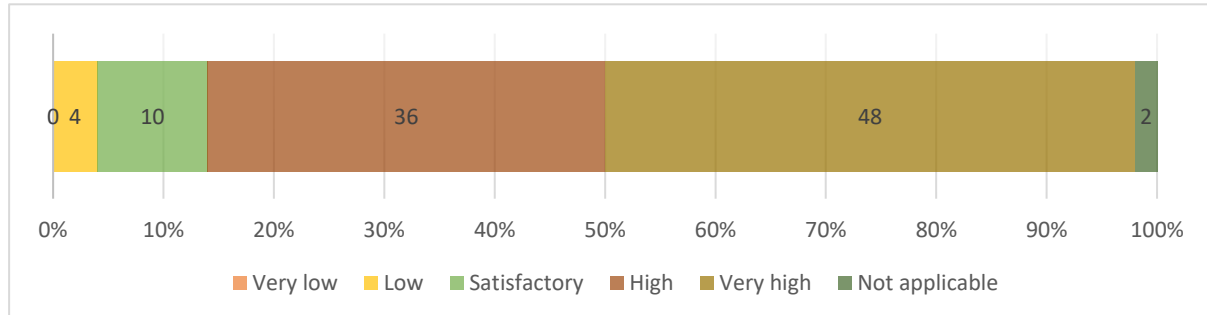
15. Communicates the machine malfunction to his supervisor (foreman).



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	2	8	32	56	2	4,2
RESULTS [%]	0	2	8	32	56	2	

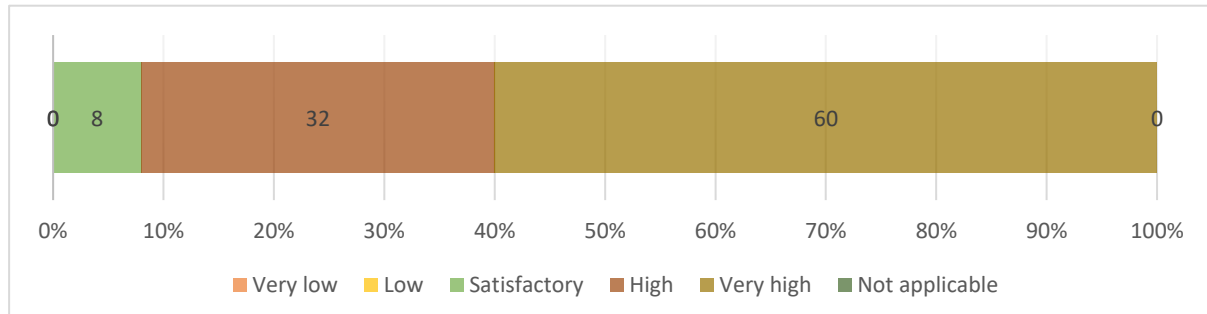
RESULTS [No]	0	1	4	16	28	1	4,4
RESULTS [%]	0	2	8	32	56	2	

16. Performs minor repairs to self-propelled mining machinery.



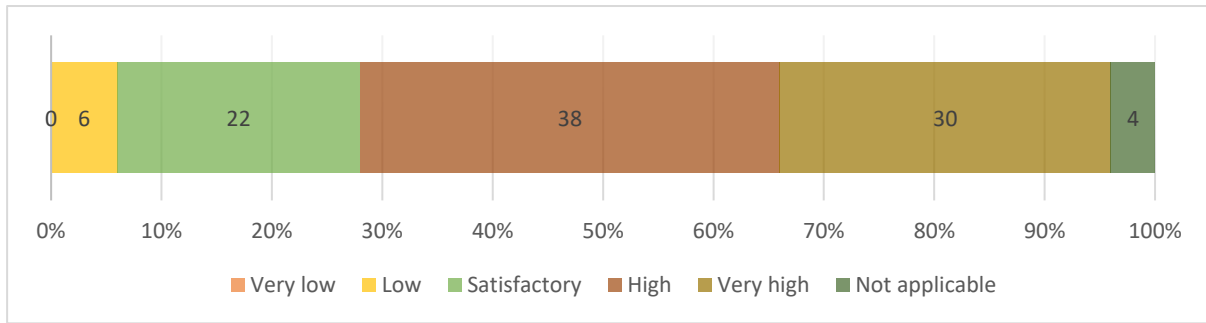
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	2	5	18	24	1	4,3
RESULTS [%]	0	4	10	36	48	2	

17. Secures the damaged machine and informs the supervisor (foreman) if the machine needs to be repaired in the repair chamber or if the factory service needs to be called.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	0	4	16	30	0	4,5
RESULTS [%]	0	0	8	32	60	0	

18. Maintains the operating book of the self-propelled mining machine on an ongoing basis.



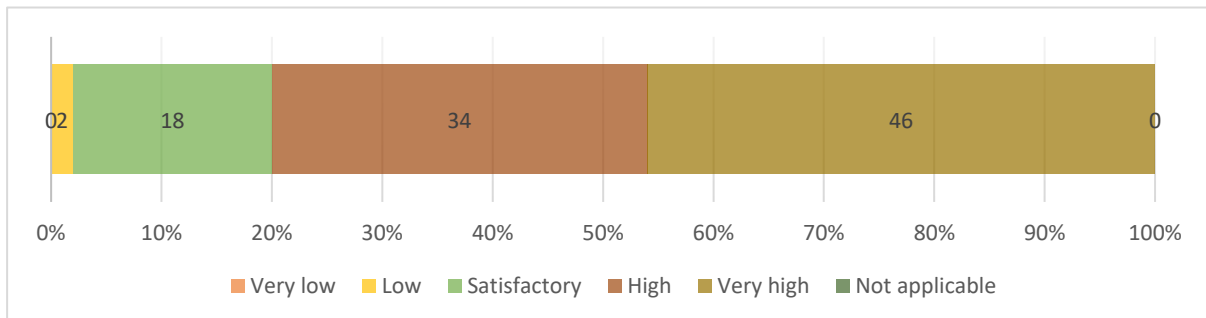
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	3	11	19	15	2	3,9
RESULTS [%]	0	6	22	38	30	4	

19. Please provide feedback, comments and suggestions to the professional skills above. If any are missing or misplaced, write them here:

- *It should be appreciated that younger and less experienced employees try to ask more experienced employees what should be done in a given situation, for example a machine failure. The specifics and the workplace require a lot of commitment from older colleagues, so I am always there to help.*

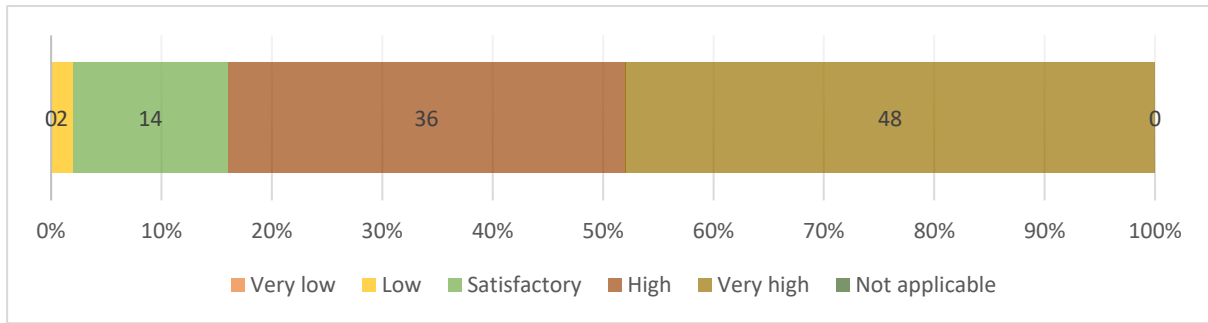
Assessment of social competence

20. Accepts responsibility for professional information entrusted.



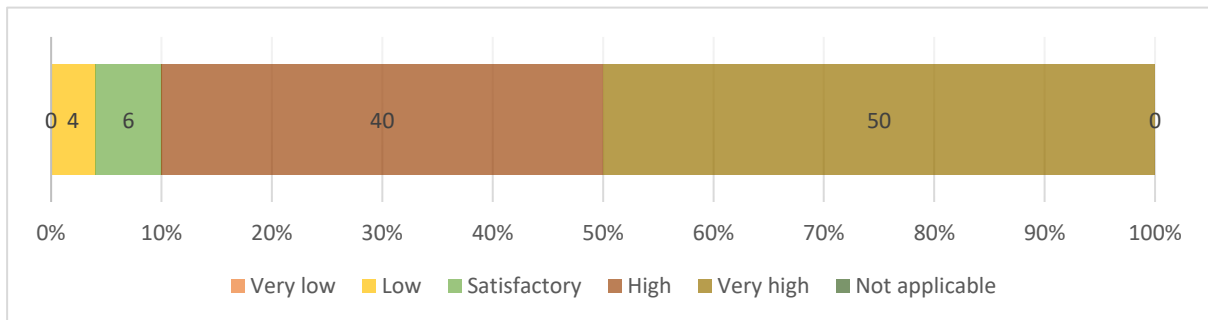
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	1	9	17	23	0	4,2
RESULTS [%]	0	2	18	34	46	0	

21. Plans the task responsibly.



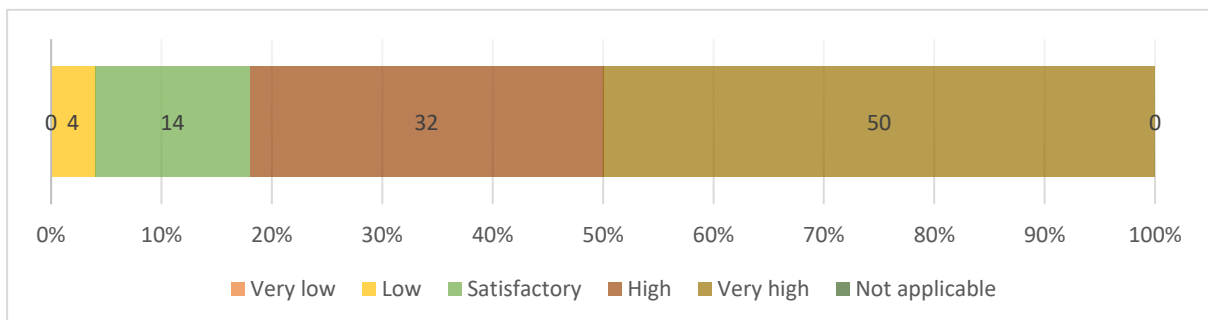
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	1	7	18	24	0	4,3
RESULTS [%]	0	2	14	36	48	0	

22. Takes responsibility for actions taken.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	2	3	20	25	0	4,4
RESULTS [%]	0	4	6	40	50	0	

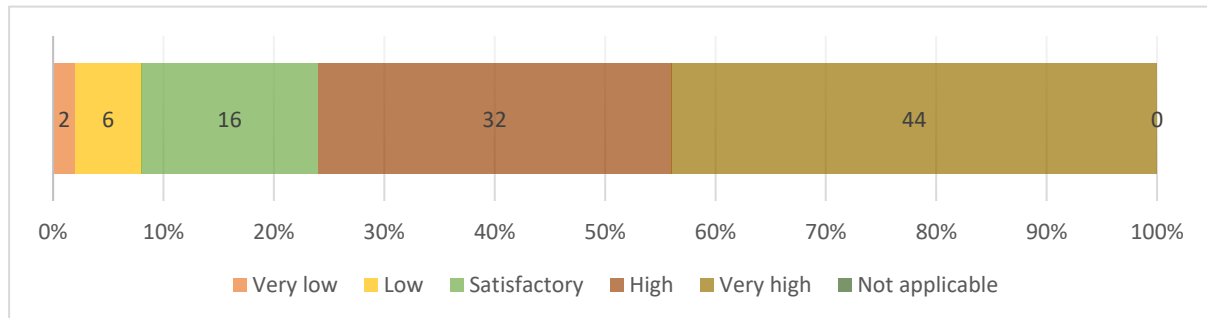
23. Anticipates the consequences of improper work activities at the workplace, including the handling of hazardous substances, and the improper operation of machinery and equipment at the workplace.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not	Average
--------	----------	-----	--------------	------	-----------	-----	---------

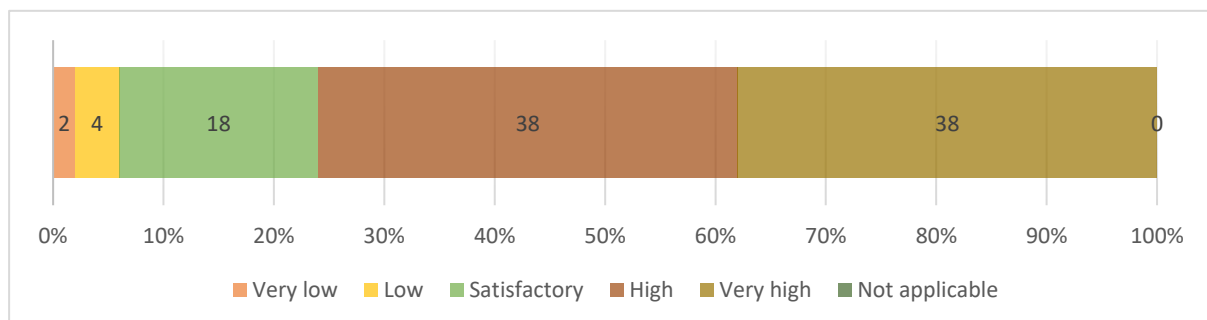
						applicable	
	1	2	3	4	5	0	
RESULTS [No]	0	2	7	16	25	0	4,3
RESULTS [%]	0	4	14	32	50	0	

24. Carries out a self-assessment of the quality of the work produced.



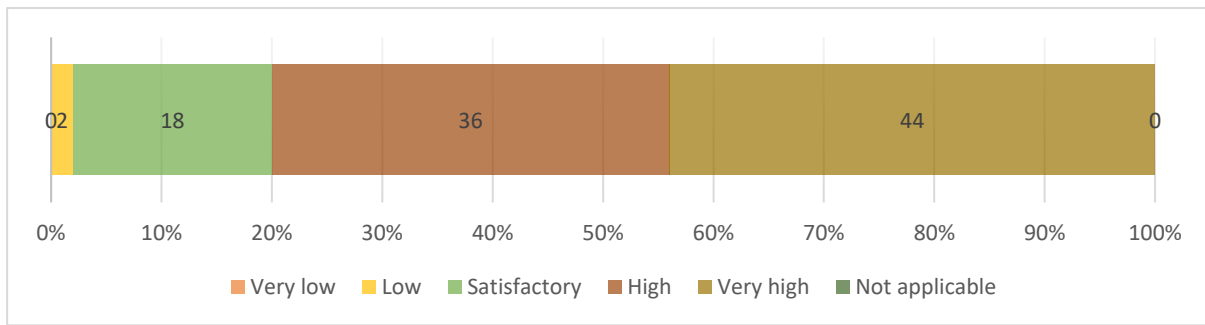
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	1	3	8	16	22	0	4,1
RESULTS [%]	2	6	16	32	44	0	

25. Suggests ways to solve problems related to the performance of professional tasks under unpredictable conditions.



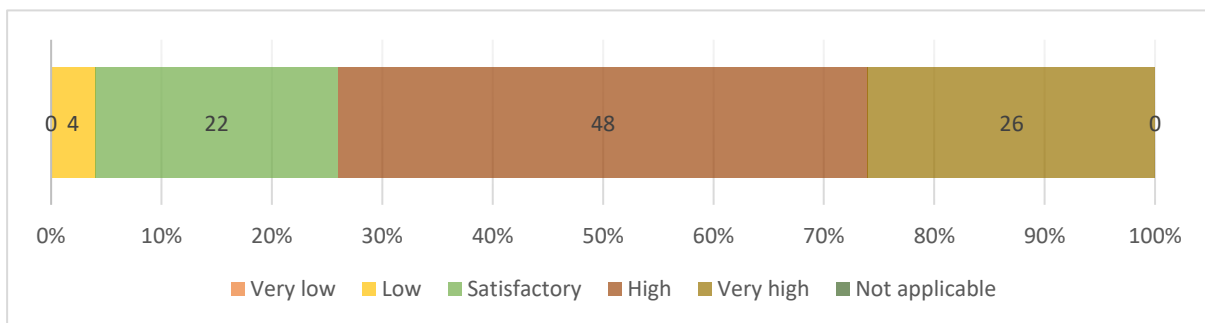
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	1	2	9	19	19	0	4,1
RESULTS [%]	2	4	18	38	38	0	

26. Respects confidentiality rules associated with the profession and the workplace.



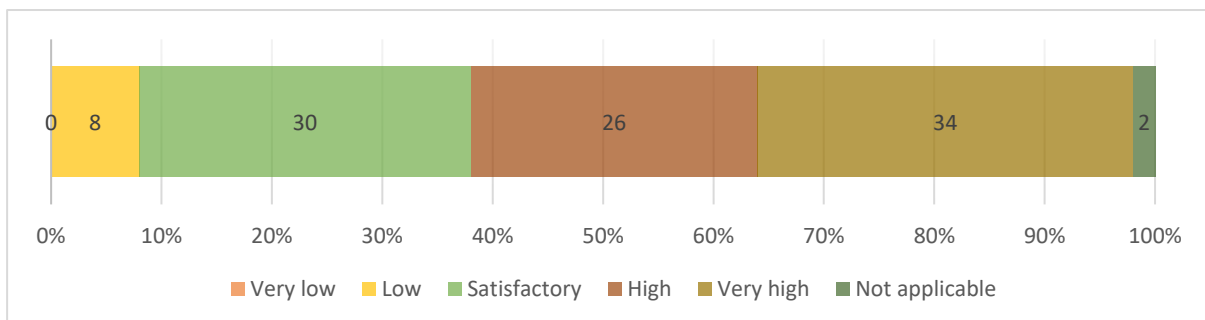
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	1	9	18	22	0	4,2
RESULTS [%]	0	2	18	36	44	0	

27. Expresses emotions, feelings and views in accordance with generally accepted norms and rules of social intercourse.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	2	11	24	13	0	4,0
RESULTS [%]	0	4	22	48	26	0	

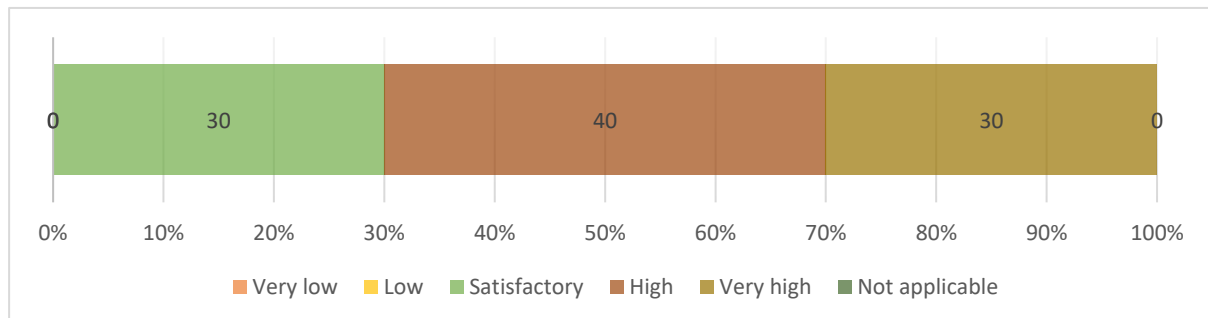
28. Applies stress management techniques.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average

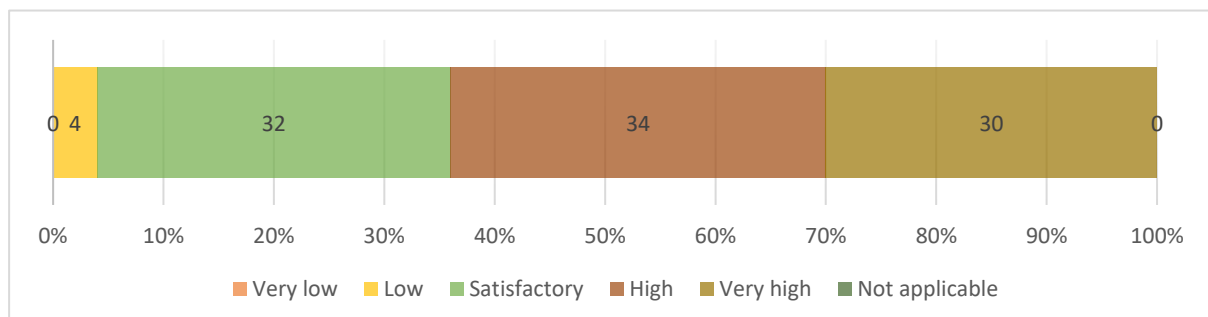
	1	2	3	4	5	0	3,9
RESULTS [No]	0	4	15	13	17	1	
RESULTS [%]	0	8	30	26	34	2	

29. Applies the principles of interpersonal communication.



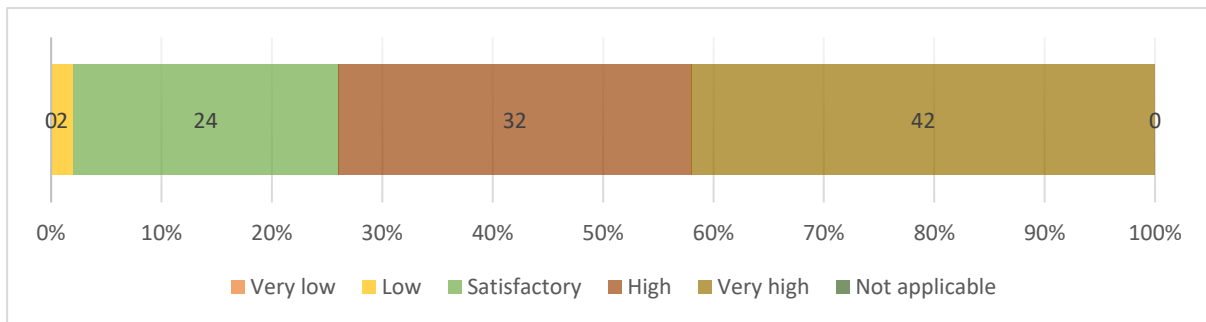
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	0	15	20	15	0	4,0
RESULTS [%]	0	0	30	40	30	0	

30. Applies problem-solving methods and techniques.



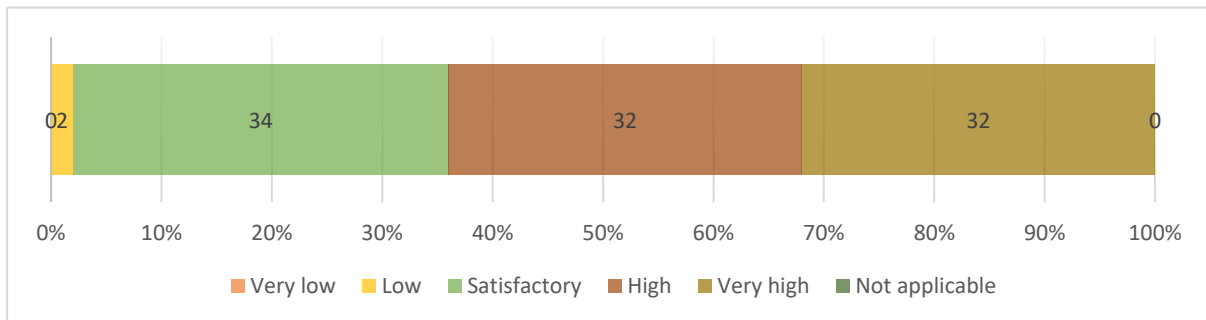
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	2	16	17	15	0	3,9
RESULTS [%]	0	4	32	34	30	0	

31. Engages in the implementation of joint team activities.



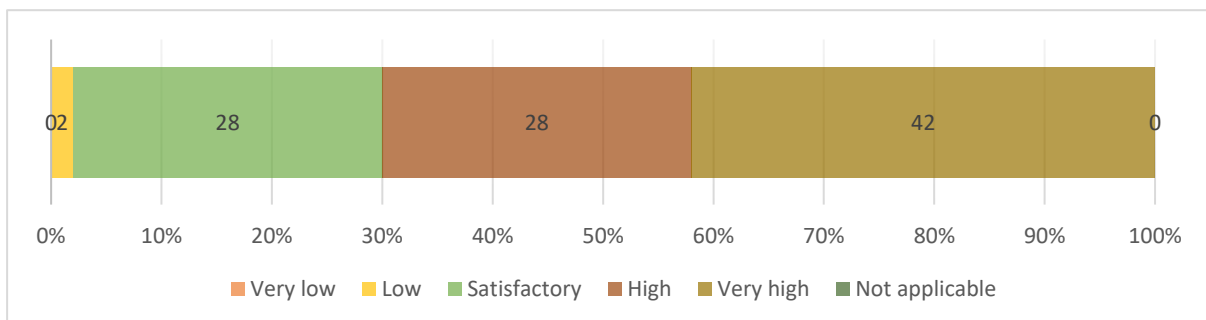
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	1	12	16	21	0	4,1
RESULTS [%]	0	2	24	32	42	0	

32. Modifies behaviour taking into account other team members.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	1	17	16	16	0	3,9
RESULTS [%]	0	2	34	32	32	0	

33. Is willing to share knowledge.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	1	17	16	16	0	3,9
RESULTS [%]	0	2	34	32	32	0	

RESULTS [No]	0	1	14	14	21	0	4,1
RESULTS [%]	0	2	28	28	42	0	

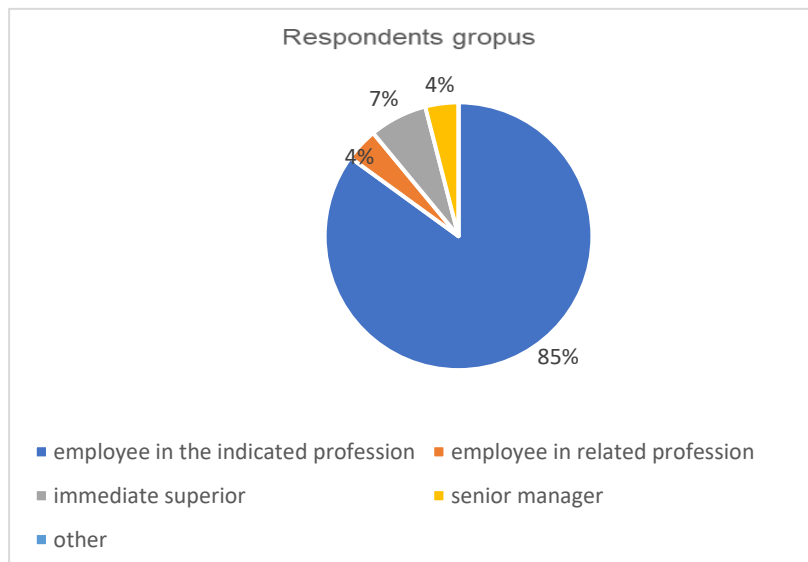
34. Please provide feedback, comments and suggestions to the social competences above.:

- *Sharing knowledge with colleagues is very important, from the quality of work, the way of working or stressful situations. I believe that talking to other employees will help to eliminate unnecessary stressful situations during work and be clearer, safer which will translate into completing the tasks assigned.*

ONLINE SURVEY RESULTS FOR THE COMPETENCE PROFILE SOLID MINERAL PROCESSING TECHNICIAN

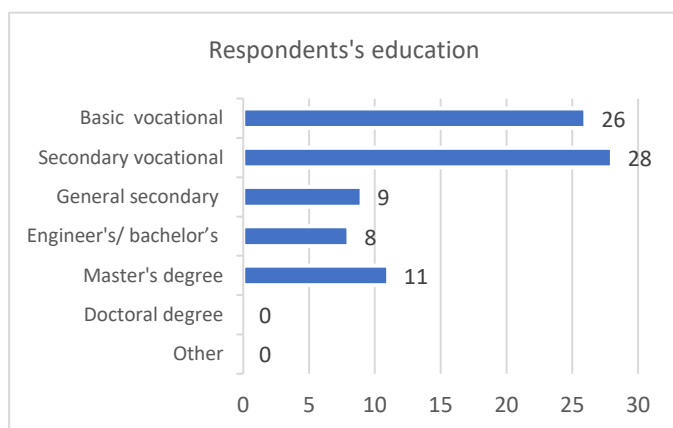
GENERAL RESULTS

82 respondents took part in the survey, divided into following groups:



	Numbers	%
employee in the indicated profession	70	85
employee in a related profession	3	4
immediate superior	6	7
senior manager	3	4
other	0	0
	82	100

The cross-section of respondents in terms of education is as follows:



	Numbers	%
Basic vocational	26	32
Secondary vocational	28	34
General secondary	9	11
Engineer's/ bachelor's	8	10
Master's degree	11	13
Doctoral degree	0	0
other	0	0
	82	100

Assessment of professional skills and social competence

The respondent, who is an employee of the surveyed profession, was asked to assign the level of individual professional and social skills characterizing this profession, observed in the respondent's opinion in himself and in his co-workers.

The respondent, who is the supervisor of employees performing the surveyed profession, was asked to express a similar (average) opinion in relation to the employees he manages.

In the survey, respondents rated on a 5-point Likert scale:

1. Very low
 2. Low
 3. Satisfactory
 4. High
 5. Very high
-
0. Not applicable

If the respondent could not take a position on a given issue, it was possible to select the "Not applicable" option. The "N/A" option has a weight of "0" and was not counted towards the average of the results.

The results for the competence profile of Solid Mineral Processing Technician expressed as the average of the grade were ranked below in ascending order.

Table. Solid Mineral Processing Technician – results of the competency gap survey (n=82).

ASSESSMENT OF PROFESSIONAL SKILLS	Average score (n=82)
Operates a storage and loading process for solid copper mineral processing products	3,4
Operates a storage process for feedstock	3,7
Defines the rules for the use of machinery and equipment for grinding copper solid minerals	3,9
Carries out the pretreatment and dosing of copper feedstock for the main processes of solid mineral processing	3,9
Performs minor repairs to machinery and equipment	4,0
Conducts the grinding of solid copper minerals	4,1
Operates machinery and equipment used in the process of classifying and crushing copper solid minerals	4,1
Operates machinery and equipment for drying	4,2
Leads the copper solid mineral classification process	4,2
Organises the workplace in accordance with ergonomic requirements	4,2
Performs ongoing maintenance and inspection of machinery and equipment	4,4

Assesses the quality of the copper solid mineral enrichment process	4,4
Performs adjustments to the operation of machinery and equipment	4,5
Applies the environmental regulations and rules applicable to the processing of solid minerals	4,5
Operates machinery and equipment used in the enrichment of copper solid minerals	4,5
Operates a copper solid mineral enrichment process	4,5
Carries out dewatering processes, treatment of circulating water, thickening and drying of solid copper mineral processing products	4,5
Applies health, safety and fire regulations and rules applicable to the processing of solid minerals	4,6
Determines the working conditions and organisation of work ensuring the required level of protection of health and life against the hazards present in the working environment	4,6
Reads from measuring instruments the operating parameters of machinery and equipment	4,6
Monitors and controls the technical and technological parameters of the processing of solid copper minerals	4,6
Applies personal and collective protective equipment in the processing of solid copper minerals	4,7

ASSESSMENT OF SOCIAL SKILLS	Average score (n=82)
Suggests ways to solve problems related to the performance of professional tasks under unpredictable conditions	3,7
Modifies behaviour taking into account other team members	3,7
Carries out a self-assessment of the quality of the work produced	3,8
Engages in the implementation of joint team activities	3,8
Applies the principles of interpersonal communication	3,9
Applies problem-solving methods and techniques	3,9
Applies stress management techniques	4,0
Expresses emotions, feelings and opinions in accordance with generally accepted norms and rules of social coexistence	4,0
Takes responsibility for actions taken	4,1
Accepts responsibility for professional information entrusted	4,2
Anticipates the consequences of improper work activities at the workplace, including the handling of hazardous substances, and the improper operation of machinery and equipment at the workplace	4,2
Is willing to share knowledge	4,4
Plans the task responsibly	4,5
Respects the rules regarding the observance of professional and workplace confidentiality	4,6

Findings

Based on the results of the competence gap survey among selected groups of employees in the copper sector (competence profile: Solid Mineral Processing Technician), the following are the professional skills and social competence whose level in the opinion of the respondents is currently the lowest (a unified threshold of the average value of the assessment of 4.0 was adopted).

It is justified to include employees in targeted educational activities developing the following skills:

PROFESSIONAL SKILLS

- Operates a storage and loading process for solid copper mineral processing products.
- Operates a storage process for feedstock.
- Defines the rules for the use of machinery and equipment for grinding solid minerals.
- Carries out the pretreatment and dosing of feedstock for the main processes of solid mineral processing.

SOCIAL COMPETENCE

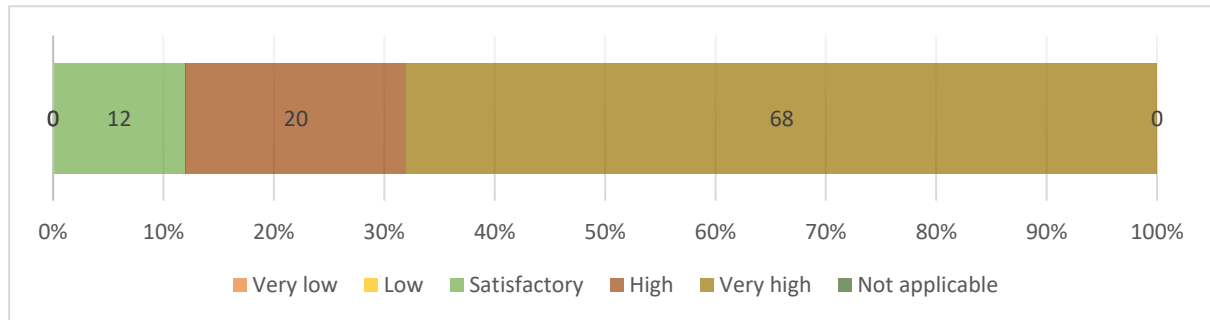
- Suggests ways to solve problems related to the performance of professional tasks under unpredictable conditions.
- Modifies behaviour taking into account other team members.
- Carries out a self-assessment of the quality of the work produced.
- Engages in the implementation of joint team activities.
- Applies the principles of interpersonal communication.
- Applies problem-solving methods and techniques.

See detailed results in the next section

DETAILED RESULTS

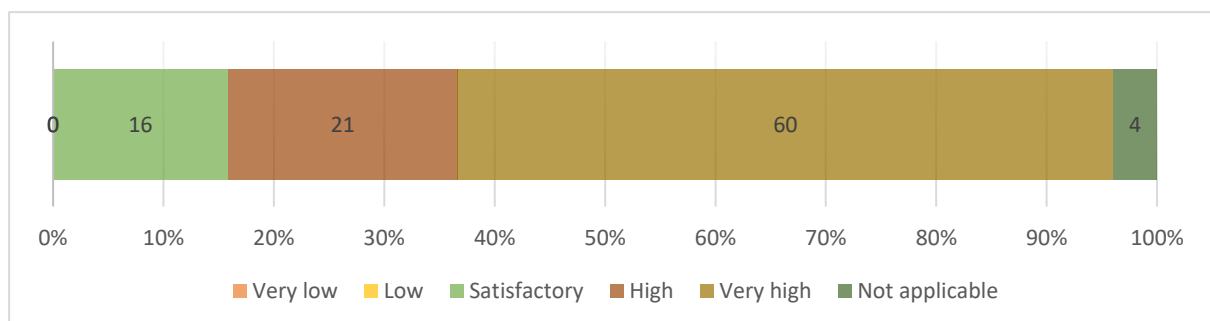
Assessment of professional skills

1. Applies health, safety and fire regulations and rules applicable to the processing of solid minerals.



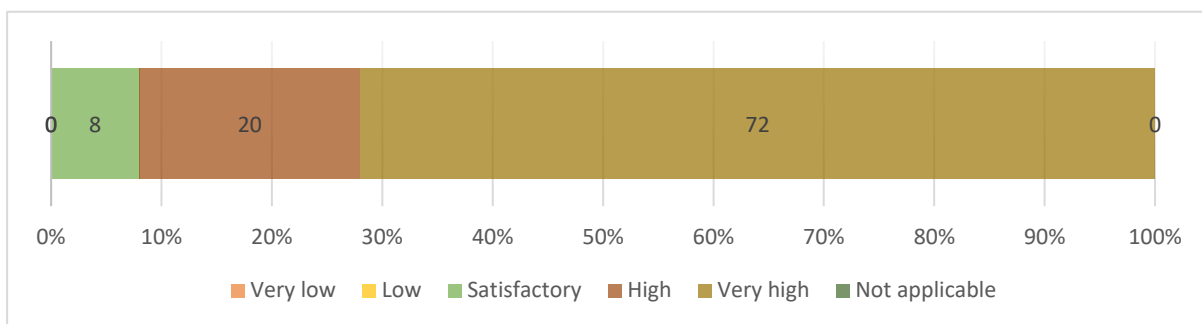
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	10	15	44	0	4,5
RESULTS [%] PL	0	0	15	22	64	0	
RESULTS [No] BY	0	0	0	1	12	0	4,9
RESULTS [%] BY	0	0	0	8	92	0	
RESULTS [No]	0	0	10	16	56	0	4,6
RESULTS [%]	0	0	12	20	68	0	

2. Applies the environmental regulations and rules applicable to the processing of solid minerals.



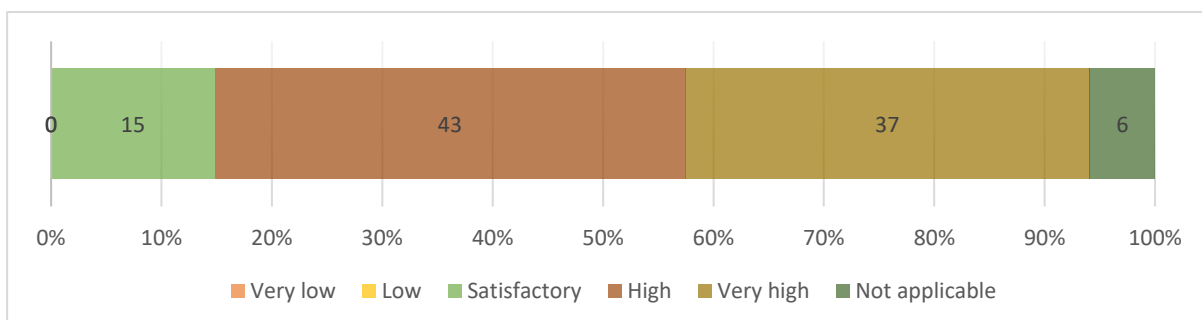
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	13	16	40	0	4,4
RESULTS [%] PL	0	0	19	23	58	0	
RESULTS [No] BY	0	0	0	1	9	3	4,9
RESULTS [%] BY	0	0	0	8	69	23	
RESULTS [No]	0	0	13	17	49	3	4,5
RESULTS [%]	0	0	16	21	60	4	

3. Adheres to working conditions and organisation of work that ensures the required level of protection of health and life from hazards present in the working environment.



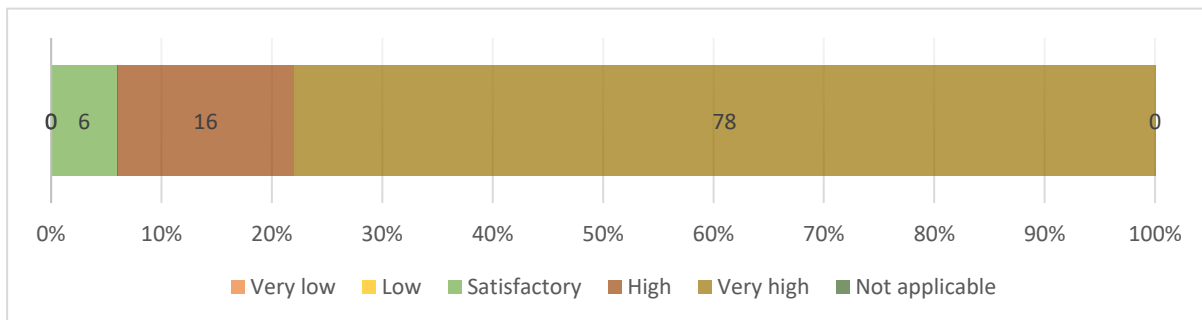
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	7	15	47	0	4,6
RESULTS [%] PL	0	0	10	22	68	0	
RESULTS [No] BY	0	0	0	1	12	0	4,9
RESULTS [%] BY	0	0	0	8	92	0	
RESULTS [No]	0	0	7	16	59	0	4,6
RESULTS [%]	0	0	8	20	72	0	

4. Uses the workstation in accordance with ergonomic requirements.



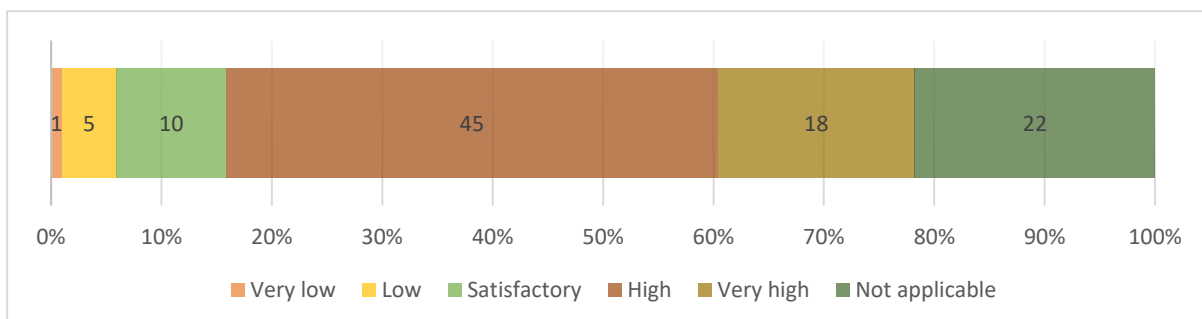
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	10	34	24	1	4,2
RESULTS [%] PL	0	0	15	49	35	1	
RESULTS [No] BY	0	0	2	1	6	4	4,4
RESULTS [%] BY	0	0	15	8	46	31	
RESULTS [No]	0	0	12	35	30	5	4,2
RESULTS [%]	0	0	15	43	37	6	

5. Applies individual and collective protection measures in the processing of solid minerals.



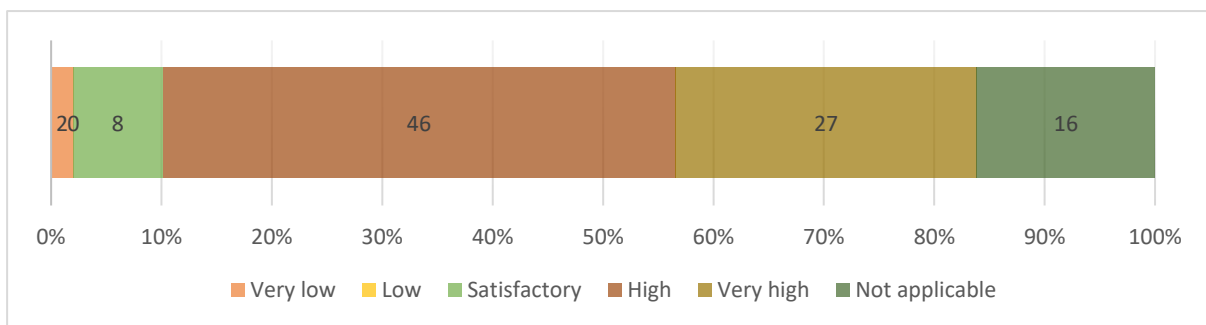
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	4	12	53	0	4,7
RESULTS [%] PL	0	0	6	17	77	0	
RESULTS [No] BY	0	0	1	1	11	0	4,8
RESULTS [%] BY	0	0	8	8	85	0	
RESULTS [No]	0	0	5	13	64	0	4,7
RESULTS [%]	0	0	6	16	78	0	

6. Defines the rules for the use of machinery and equipment for grinding solid minerals.



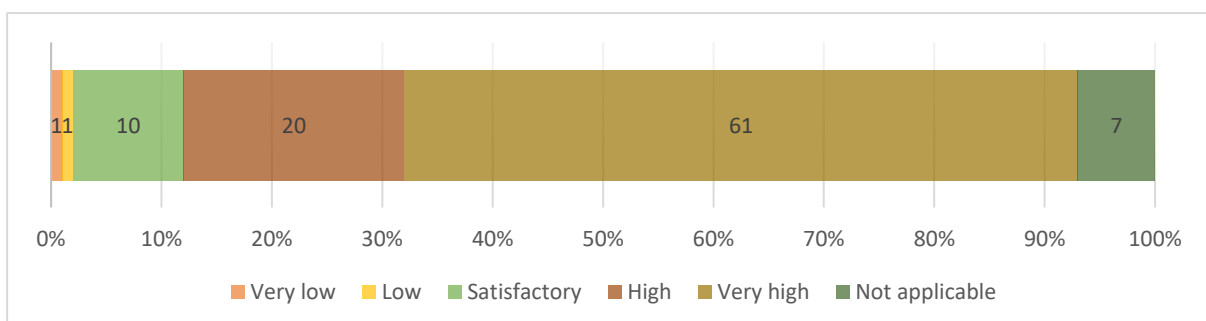
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	2	7	36	10	14	4,0
RESULTS [%] PL	0	3	10	52	15	20	
RESULTS [No] BY	1	2	1	1	4	4	3,6
RESULTS [%] BY	8	15	8	8	31	31	
RESULTS [No]	1	4	8	37	14	18	3,9
RESULTS [%]	1	5	10	45	18	22	

7. Operates machinery and equipment used in the copper ore classification and grinding process.



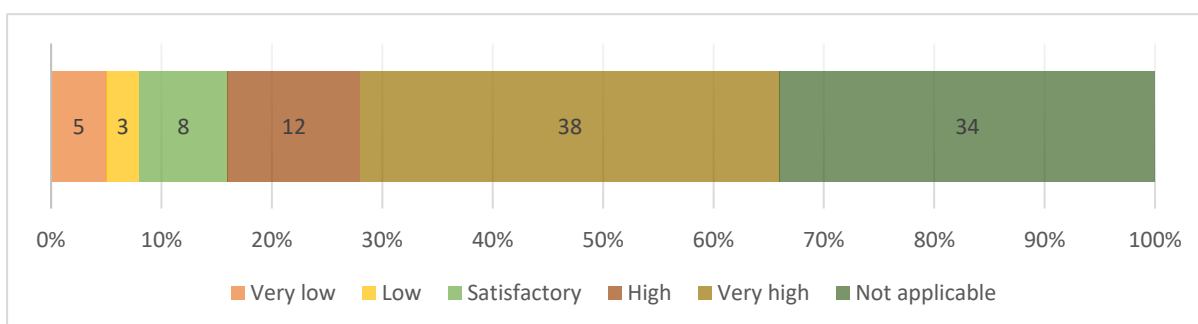
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	1	0	7	36	18	7	4,1
RESULTS [%] PL	1	0	10	52	26	10	
RESULTS [No] BY	1	0	0	2	4	6	4,1
RESULTS [%] BY	8	0	0	15	31	46	
RESULTS [No]	2	0	7	38	22	13	4,1
RESULTS [%]	2	0	8	46	27	16	

8. Operates machines and devices used in the copper ore enrichment process.



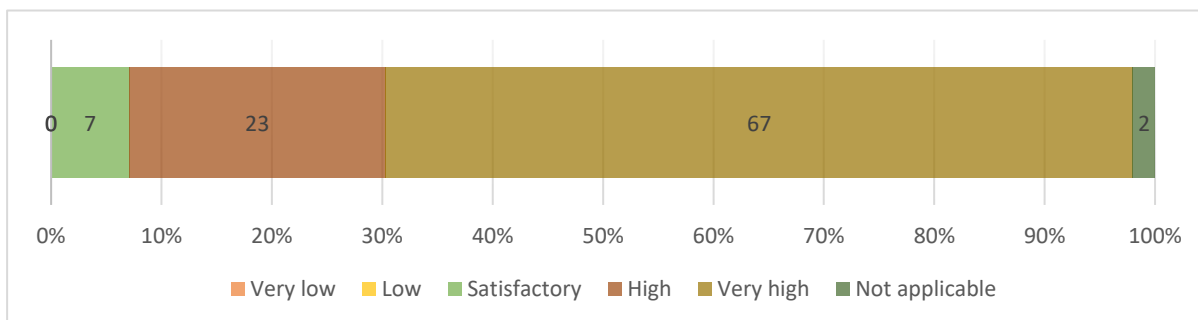
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	8	15	44	2	4,5
RESULTS [%] PL	0	0	12	22	64	3	
RESULTS [No] BY	1	1	0	1	6	4	4,1
RESULTS [%] BY	8	8	0	8	46	31	
RESULTS [No]	1	1	8	16	50	6	4,5
RESULTS [%]	1	1	10	20	61	7	

9. Operates machines and devices in the concentrate drying process.



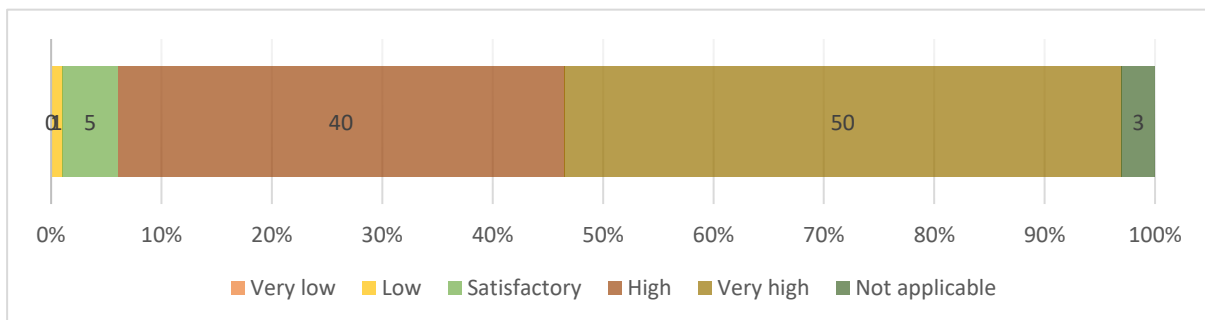
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	3	2	7	9	25	23	4,1
RESULTS [%] PL	4	3	10	13	36	33	
RESULTS [No] BY	1	0	0	1	6	5	4,4
RESULTS [%] BY	8	0	0	8	46	39	
RESULTS [No]	4	2	7	10	31	28	4,2
RESULTS [%]	5	3	8	12	38	34	

10. Reads the operating parameters of processing machinery and equipment from the indications of measuring instruments.



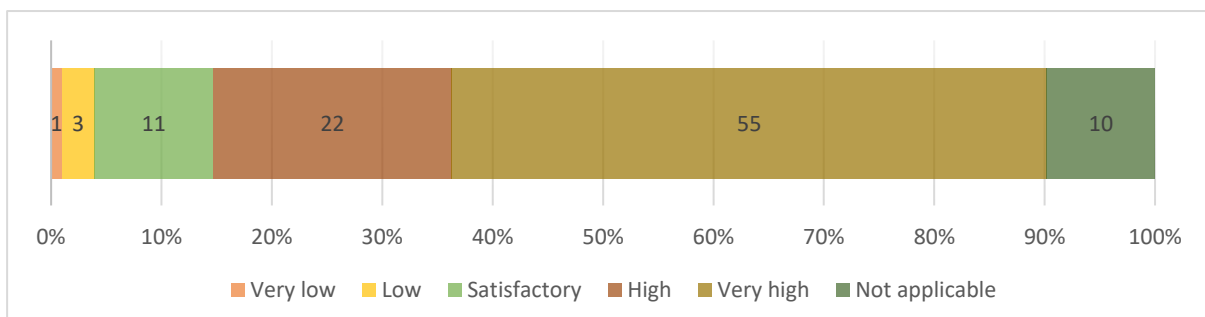
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	4	18	46	1	4,6
RESULTS [%] PL	0	0	6	26	67	1	
RESULTS [No] BY	0	0	2	1	9	1	4,6
RESULTS [%] BY	0	0	15	8	69	8	
RESULTS [No]	0	0	6	19	55	2	4,6
RESULTS [%]	0	0	7	23	67	2	

11. Performs adjustments to the operation of processing machinery and equipment.



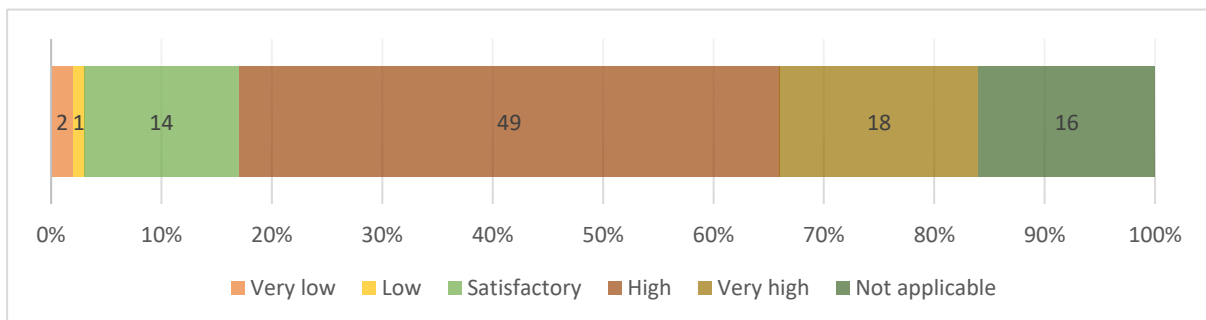
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	1	3	32	30	3	4,4
RESULTS [%] PL	0	1	4	46	44	4	
RESULTS [No] BY	0	0	1	1	11	0	4,8
RESULTS [%] BY	0	0	8	8	84	0	
RESULTS [No]	0	1	4	33	41	3	4,5
RESULTS [%]	0	1	5	40	50	3	

12. Performs ongoing maintenance and inspections of machines and processing equipment.



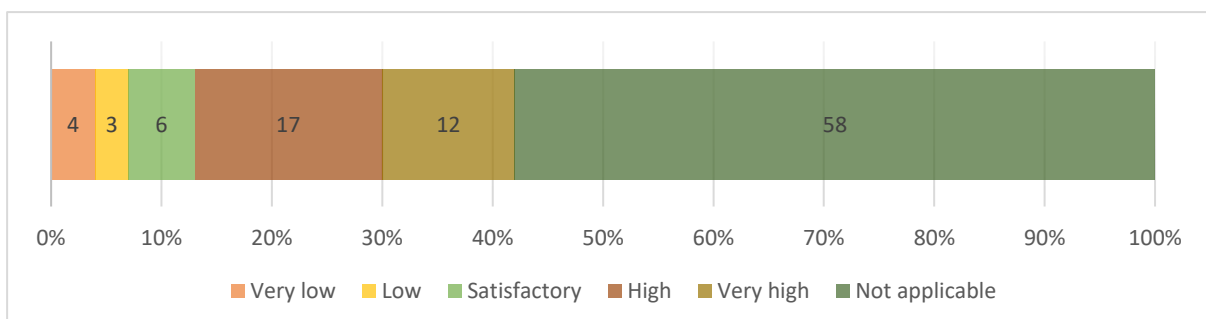
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	2	9	17	36	5	4,4
RESULTS [%] PL	0	3	13	25	52	7	
RESULTS [No] BY	1	0	0	1	9	3	4,5
RESULTS [%] BY	8	0	0	8	69	23	
RESULTS [No]	1	2	9	18	45	8	4,4
RESULTS [%]	1	3	11	22	55	10	

13. Performs minor repairs of machines and processing equipment.



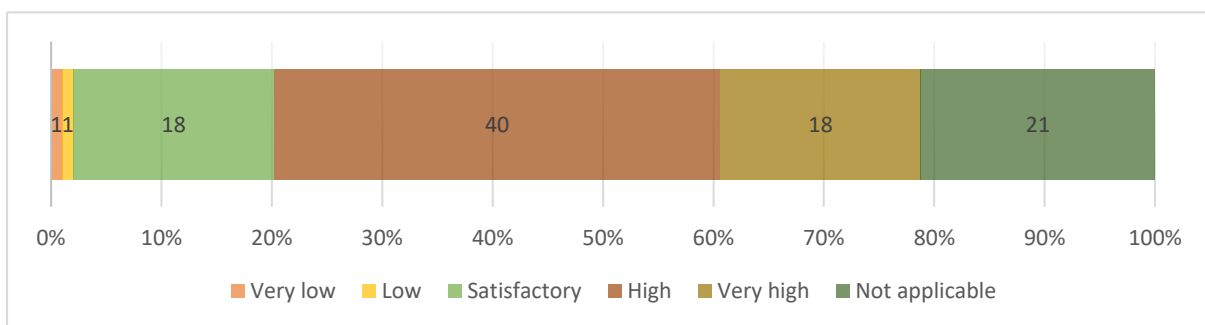
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	1	1	10	39	11	7	4,0
RESULTS [%] PL	1	1	15	57	16	10	
RESULTS [No] BY	1	0	1	1	4	6	4,0
RESULTS [%] BY	8	0	8	8	31	46	
RESULTS [No]	2	1	11	40	15	13	4,0
RESULTS [%]	2	1	14	49	18	16	

14. Operates a storage process for feedstock.



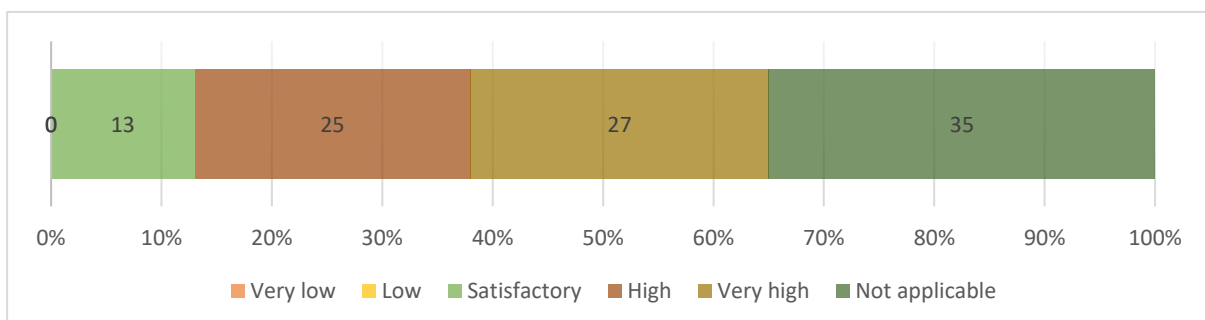
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	2	1	5	14	6	41	3,8
RESULTS [%] PL	3	1	7	20	9	60	
RESULTS [No] BY	1	2	0	0	4	6	3,6
RESULTS [%] BY	8	15	0	0	31	46	
RESULTS [No]	3	3	5	14	10	47	3,7
RESULTS [%]	4	3	6	17	12	58	

15. Carries out the pretreatment and dosing of feedstock for the main processes of solid mineral processing.



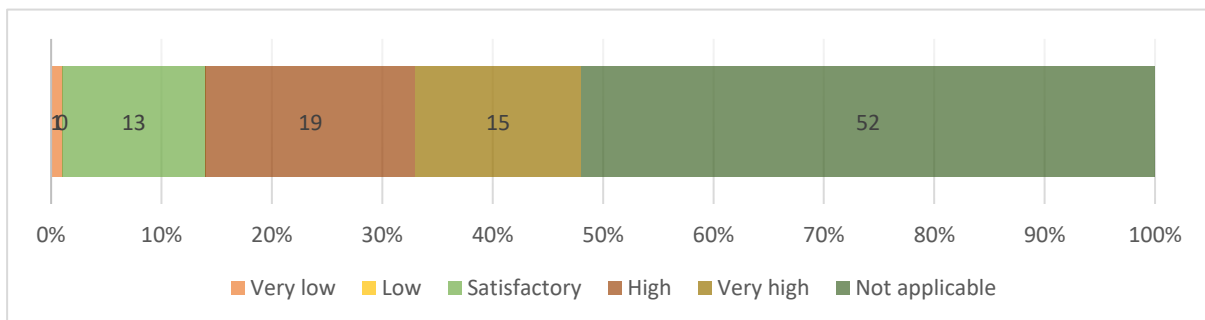
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	1	12	33	12	11	4,0
RESULTS [%] PL	0	1	17	48	17	16	
RESULTS [No] BY	1	0	3	0	3	6	3,6
RESULTS [%] BY	8	0	23	0	23	46	
RESULTS [No]	1	1	15	33	15	17	3,9
RESULTS [%]	1	1	18	40	18	21	

16. Leads the process of classifying solid minerals.



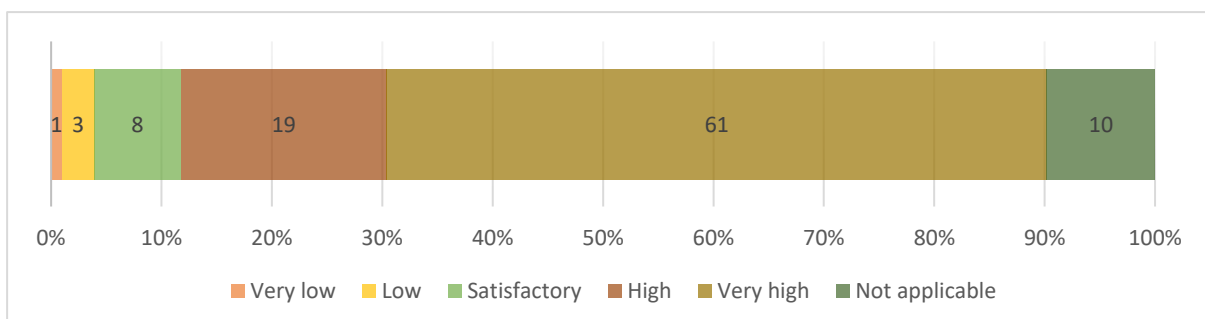
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	10	21	13	25	4,1
RESULTS [%] PL	0	0	15	30	19	36	
RESULTS [No] BY	0	0	0	0	9	4	5,0
RESULTS [%] BY	0	0	0	0	69	31	
RESULTS [No]	0	0	10	21	22	29	4,2
RESULTS [%]	0	0	13	25	27	35	

17. Conducts the grinding of solid minerals.



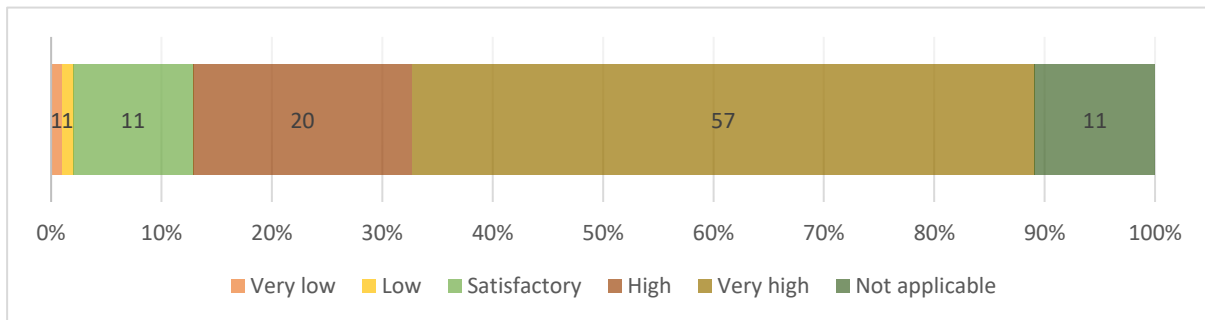
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	1	0	9	13	10	36	4,0
RESULTS [%] PL	1	0	13	19	15	52	
RESULTS [No] BY	1	0	0	0	6	6	4,4
RESULTS [%] BY	8	0	0	0	46	46	
RESULTS [No]	2	0	9	13	16	42	4,1
RESULTS [%]	2	0	11	16	20	51	

18. It conducts the process of enrichment of solid minerals.



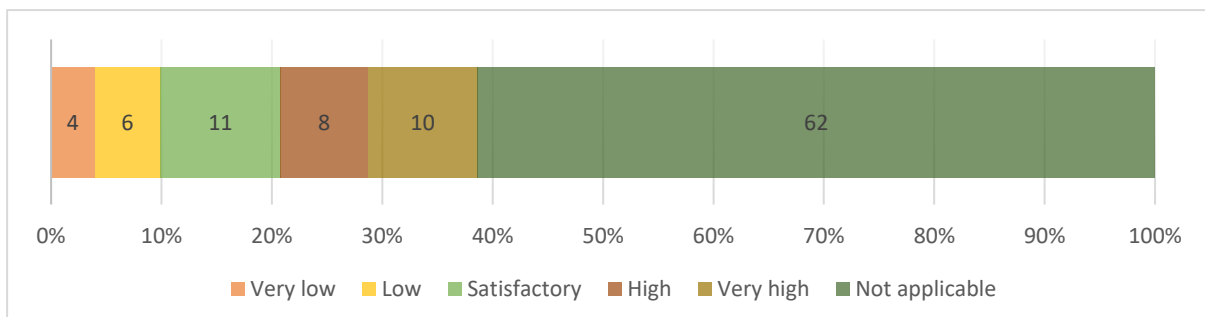
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	2	6	15	43	3	4,5
RESULTS [%] PL	0	3	9	22	62	4	
RESULTS [No] BY	1	0	0	0	7	5	4,5
RESULTS [%] BY	8	0	0	0	54	39	
RESULTS [No]	1	2	6	15	50	8	4,5
RESULTS [%]	1	3	8	19	61	10	

19. Evaluates the quality of the solid mineral enrichment process.



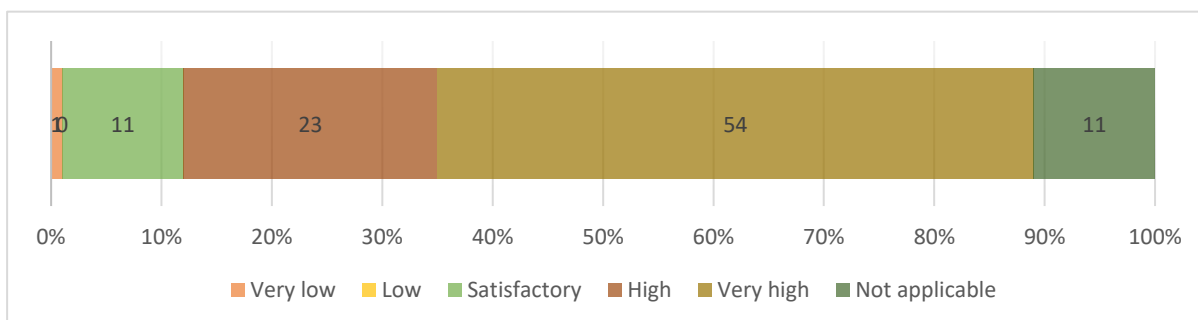
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	1	0	8	15	39	6	4,5
RESULTS [%] PL	1	0	12	22	57	9	
RESULTS [No] BY	0	1	1	1	7	3	4,4
RESULTS [%] BY	0	8	8	8	54	23	
RESULTS [No]	1	1	9	16	46	9	4,4
RESULTS [%]	1	1	11	20	57	11	

20. Operates a storage and loading process for solid mineral processing products.



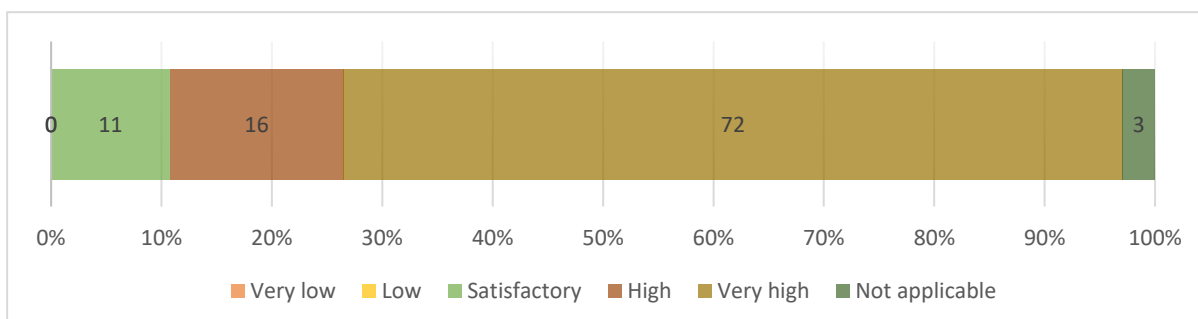
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	2	3	8	6	6	44	3,5
RESULTS [%] PL	3	4	12	9	9	64	
RESULTS [No] BY	1	2	1	0	2	7	3,0
RESULTS [%] BY	8	15	8	0	15	54	
RESULTS [No]	3	5	9	6	8	51	3,4
RESULTS [%]	4	6	11	8	10	62	

21. Carries out solid mineral processing.



SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	1	0	9	18	36	5	4,4
RESULTS [%] PL	1	0	13	26	52	7	
RESULTS [No] BY	0	0	0	1	8	4	4,9
RESULTS [%] BY	0	0	0	8	62	31	
RESULTS [No]	1	0	9	19	44	9	4,5
RESULTS [%]	1	0	11	23	54	11	

22. Monitors and controls the technical and technological parameters of solid mineral processing.



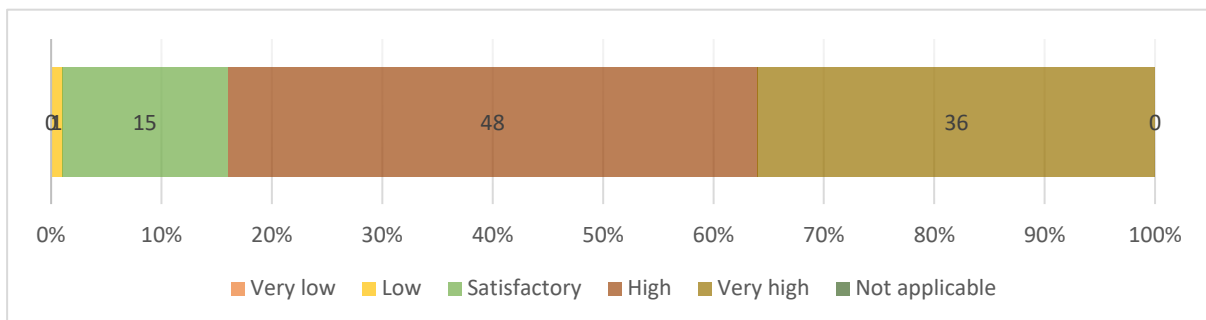
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	8	13	48	1	4,6
RESULTS [%] PL	0	0	12	19	70	2	
RESULTS [No] BY	0	0	1	0	11	1	4,8
RESULTS [%] BY	0	0	8	0	85	8	
RESULTS [No]	0	0	9	13	59	2	4,6
RESULTS [%]	0	0	11	16	72	3	

23. Please provide feedback, comments and suggestions to the professional skills above.:

- NO computer control in the control cabin (remotely) makes it difficult to work when turning on the entire flotation line as well as when leaving.

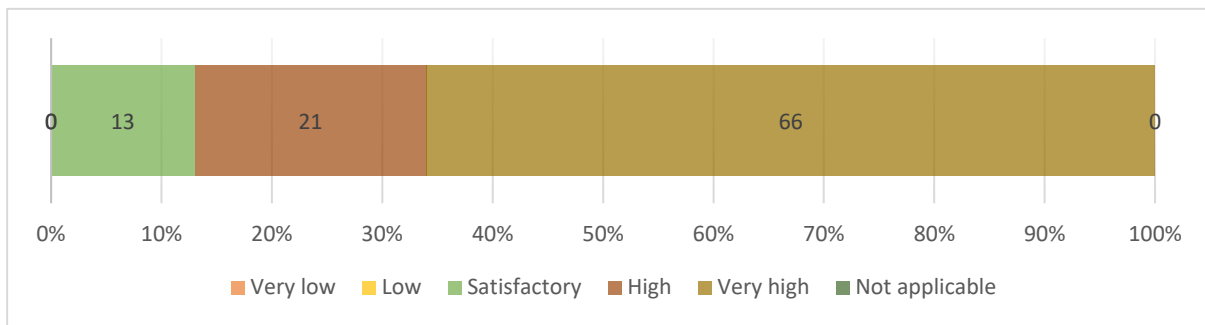
Assessment of social competence

24. Accepts responsibility for professional information entrusted.



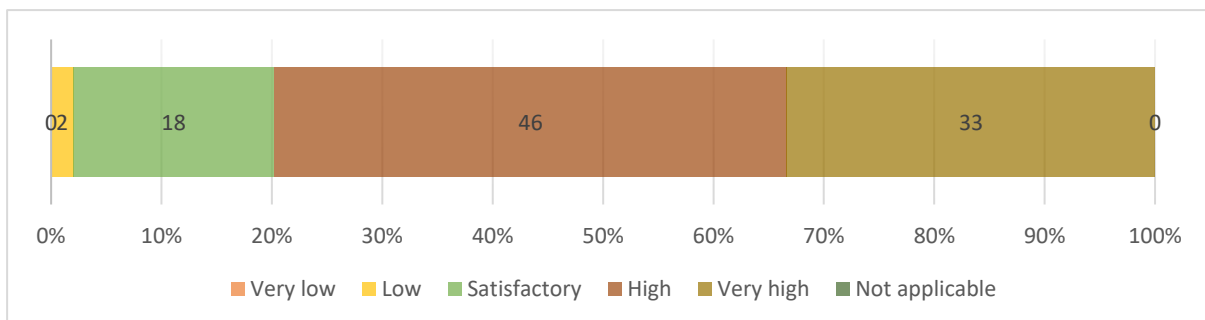
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	1	10	37	21	0	4,1
RESULTS [%] PL	0	1	15	54	30	0	
RESULTS [No] BY	0	0	2	2	9	0	4,5
RESULTS [%] BY	0	0	15	15	69	0	
RESULTS [No]	0	1	12	39	30	0	4,2
RESULTS [%]	0	1	15	48	36	0	

25. Plans the task responsibly.



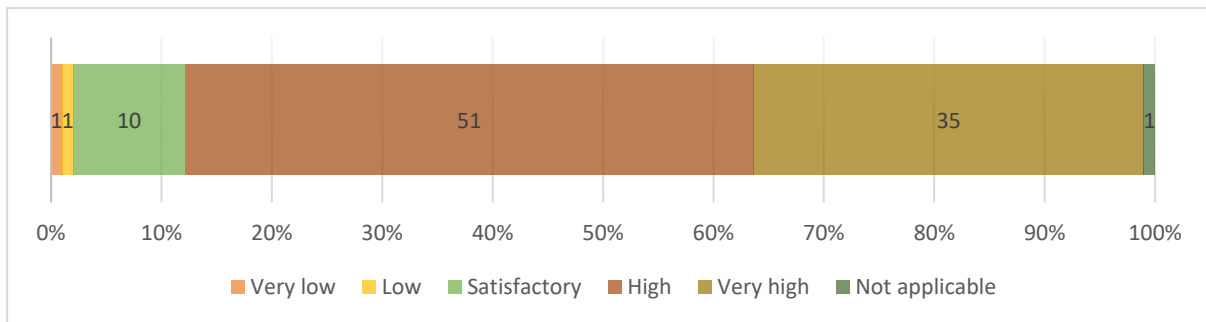
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	9	15	45	0	4,5
RESULTS [%] PL	0	0	13	22	65	0	
RESULTS [No] BY	0	0	2	2	9	0	4,5
RESULTS [%] BY	0	0	15	15	69	0	
RESULTS [No]	0	0	11	17	54	0	4,5
RESULTS [%]	0	0	13	21	66	0	

26. Takes responsibility for actions taken.



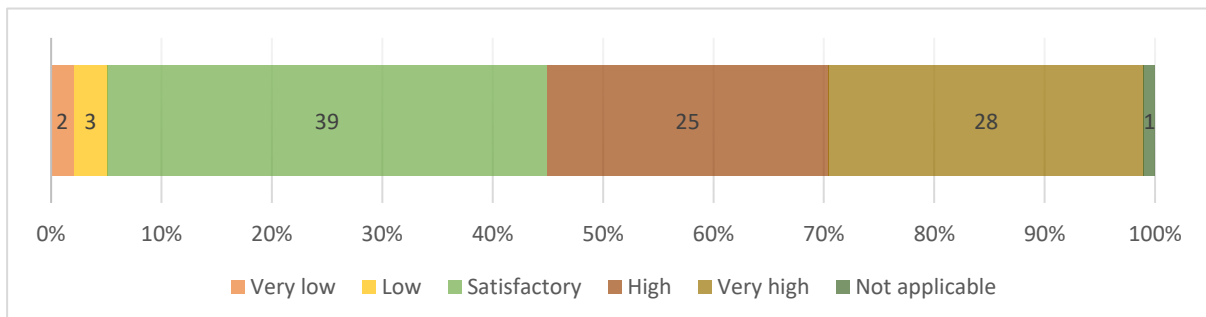
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	1	11	38	19	0	4,1
RESULTS [%] PL	0	1	16	55	28	0	
RESULTS [No] BY	0	1	4	0	8	0	4,1
RESULTS [%] BY	0	8	31	0	62	0	
RESULTS [No]	0	2	15	38	27	0	4,1
RESULTS [%]	0	2	18	46	33	0	

27. Anticipates the consequences of improper work activities at the workplace, including the handling of hazardous substances, and the improper operation of machinery and equipment at the workplace.



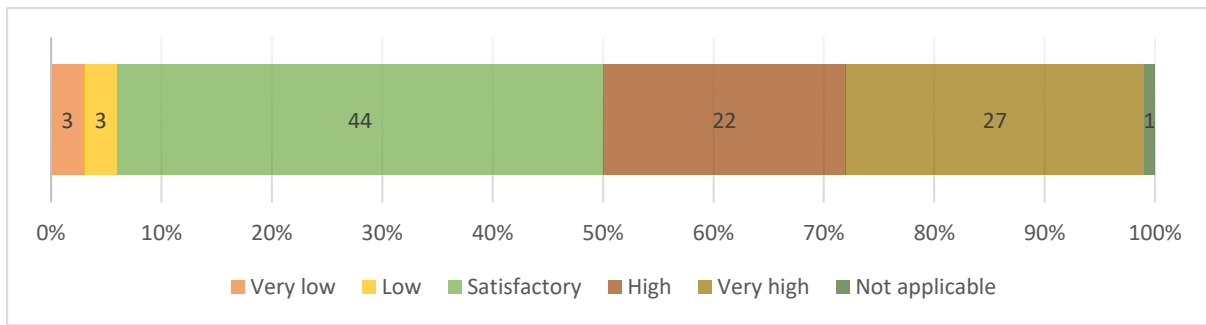
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	7	41	20	1	4,2
RESULTS [%] PL	0	0	10	59	29	1	
RESULTS [No] BY	1	1	1	1	9	0	4,2
RESULTS [%] BY	8	8	8	8	69	0	
RESULTS [No]	1	1	8	42	29	1	4,2
RESULTS [%]	1	1	10	51	35	1	

28. Carries out a self-assessment of the quality of the work produced.



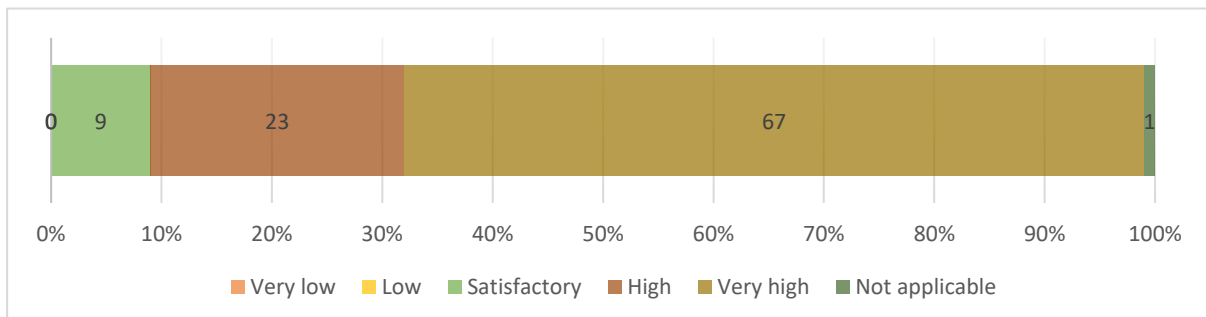
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	3	29	21	15	1	3,7
RESULTS [%] PL	0	4	42	30	22	1	
RESULTS [No] BY	2	0	3	0	8	0	3,9
RESULTS [%] BY	15	0	23	0	62	0	
RESULTS [No]	2	3	32	21	23	1	3,8
RESULTS [%]	2	3	39	25	28	1	

29. Suggests ways to solve problems related to the performance of professional tasks under unpredictable conditions.



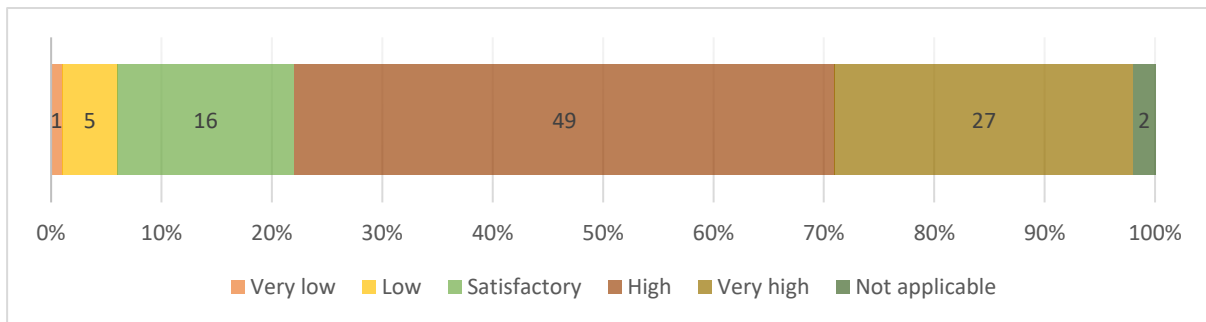
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	1	2	35	17	13	1	3,6
RESULTS [%] PL	1	3	51	25	19	1	
RESULTS [No] BY	2	0	1	1	9	0	4,2
RESULTS [%] BY	15	0	8	8	69	0	
RESULTS [No]	3	2	36	18	22	1	3,7
RESULTS [%]	3	3	44	22	27	1	

30. Respects the rules regarding the observance of professional and workplace confidentiality.



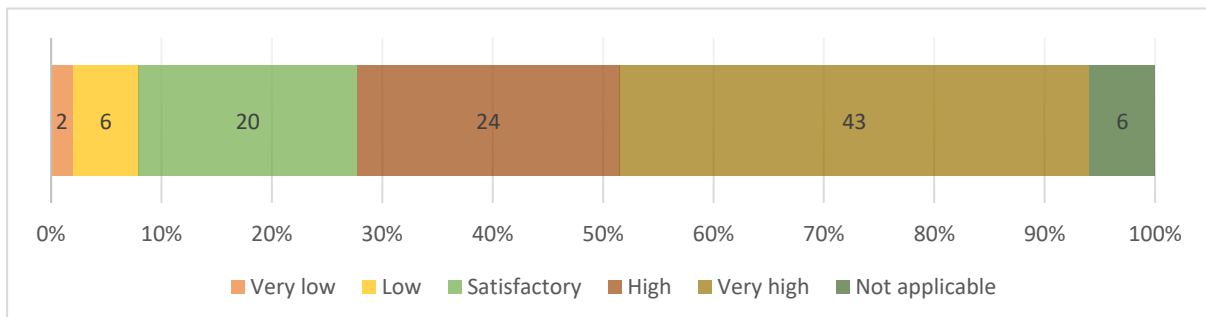
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	6	18	45	0	4,6
RESULTS [%] PL	0	0	9	26	65	0	
RESULTS [No] BY	0	0	1	1	10	1	4,7
RESULTS [%] BY	0	0	8	8	77	8	
RESULTS [No]	0	0	7	19	55	1	4,6
RESULTS [%]	0	0	9	23	67	1	

31. Expresses emotions, feelings and opinions in accordance with generally accepted norms and rules of social coexistence.



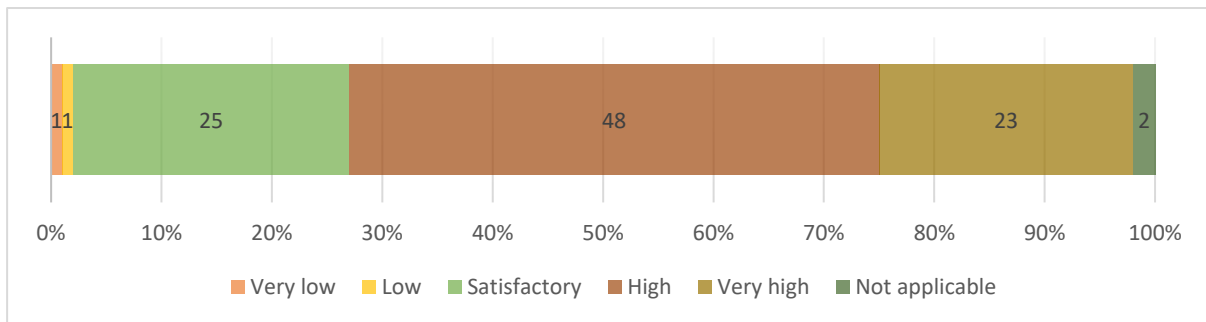
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	4	11	38	16	0	4,0
RESULTS [%] PL	0	6	16	55	23	0	
RESULTS [No] BY	1	0	2	2	6	2	4,1
RESULTS [%] BY	8	0	15	15	46	15	
RESULTS [No]	1	4	13	40	22	2	4,0
RESULTS [%]	1	5	16	49	27	2	

32. Applies stress management techniques.



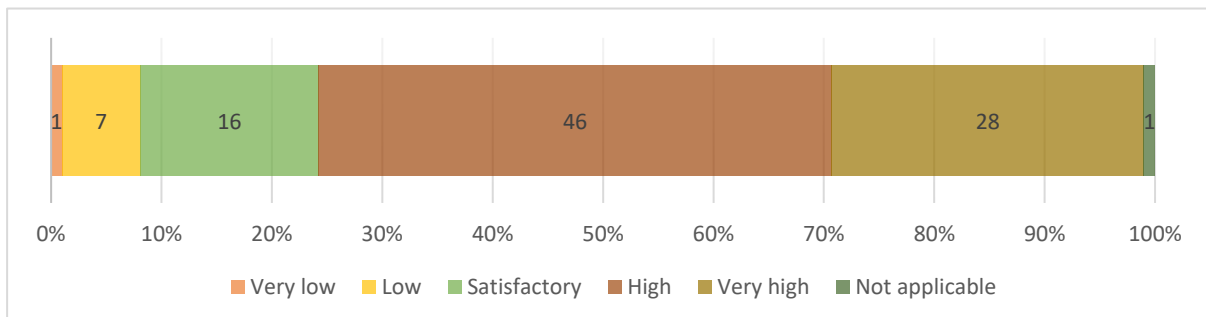
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	3	15	19	29	3	4,1
RESULTS [%] PL	0	4	22	28	42	4	
RESULTS [No] BY	2	2	1	0	6	2	3,6
RESULTS [%] BY	15	15	8	0	46	15	
RESULTS [No]	2	5	16	19	35	5	4,0
RESULTS [%]	2	6	20	24	43	6	

33. Applies the principles of interpersonal communication.



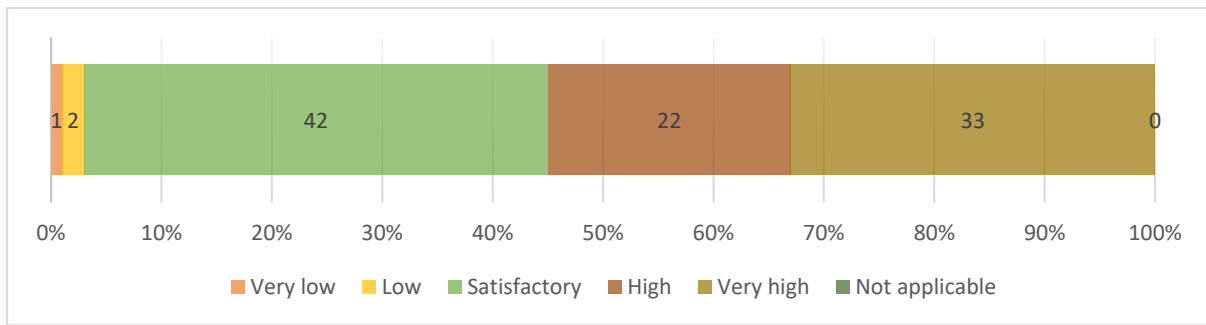
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	1	17	39	12	0	3,9
RESULTS [%] PL	0	1	25	57	17	0	
RESULTS [No] BY	1	0	3	0	7	2	4,1
RESULTS [%] BY	8	0	23	0	53	15	
RESULTS [No]	1	1	20	39	19	2	3,9
RESULTS [%]	1	1	25	48	23	2	

34. Applies problem-solving methods and techniques.



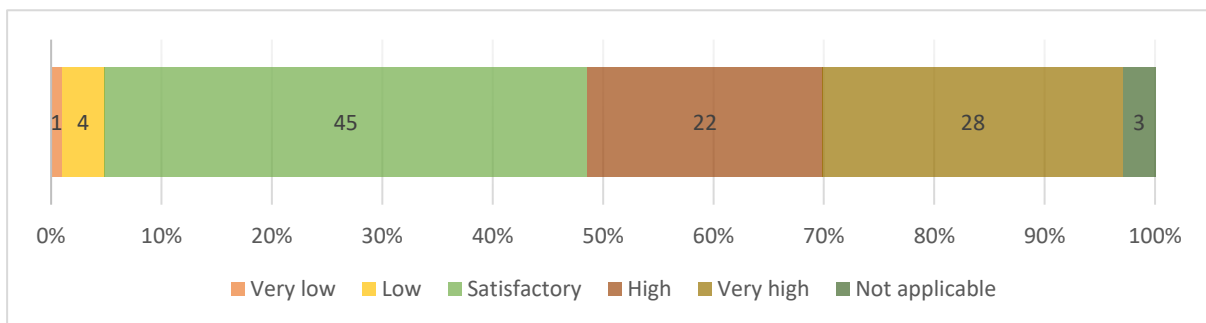
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	5	12	38	13	1	3,9
RESULTS [%] PL	0	7	17	55	19	1	
RESULTS [No] BY	1	1	1	0	10	0	4,3
RESULTS [%] BY	8	8	8	0	77	0	
RESULTS [No]	1	6	13	38	23	1	3,9
RESULTS [%]	1	7	16	46	28	1	

35. Engages in the implementation of joint team activities.



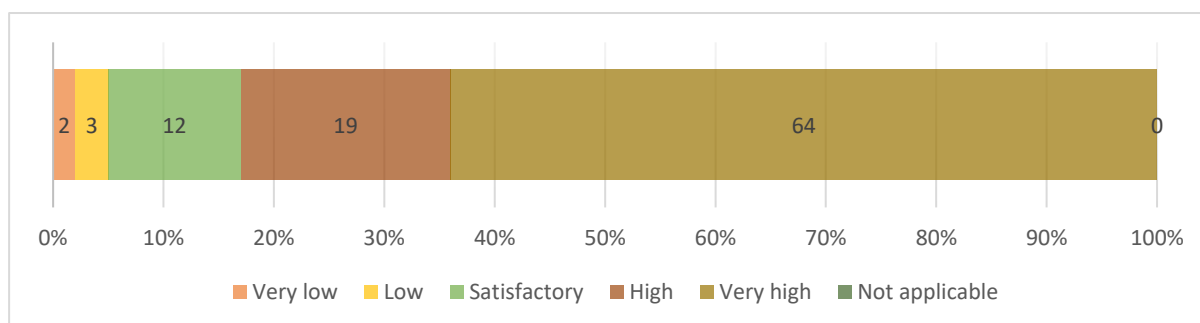
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	1	33	17	18	0	3,8
RESULTS [%] PL	0	1	48	25	26	0	
RESULTS [No] BY	1	1	1	1	9	0	4,2
RESULTS [%] BY	8	8	8	8	69	0	
RESULTS [No]	1	2	34	18	27	0	3,8
RESULTS [%]	1	2	42	22	33	0	

36. Modifies behaviour taking into account other team members.



SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	2	36	17	14	3	3,6
RESULTS [%] PL	0	3	52	25	20	4	
RESULTS [No] BY	1	1	1	1	9	0	4,2
RESULTS [%] BY	8	8	8	8	69	0	
RESULTS [No]	1	3	37	18	23	3	3,7
RESULTS [%]	1	4	45	22	28	3	

37. Is willing to share knowledge.



SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	1	9	15	44	0	4,5
RESULTS [%] PL	0	1	13	22	64	0	
RESULTS [No] BY	2	2	1	0	8	0	3,8
RESULTS [%] BY	15	15	8	0	62	0	
RESULTS [No]	2	3	10	15	52	0	4,4
RESULTS [%]	2	3	12	19	64	0	

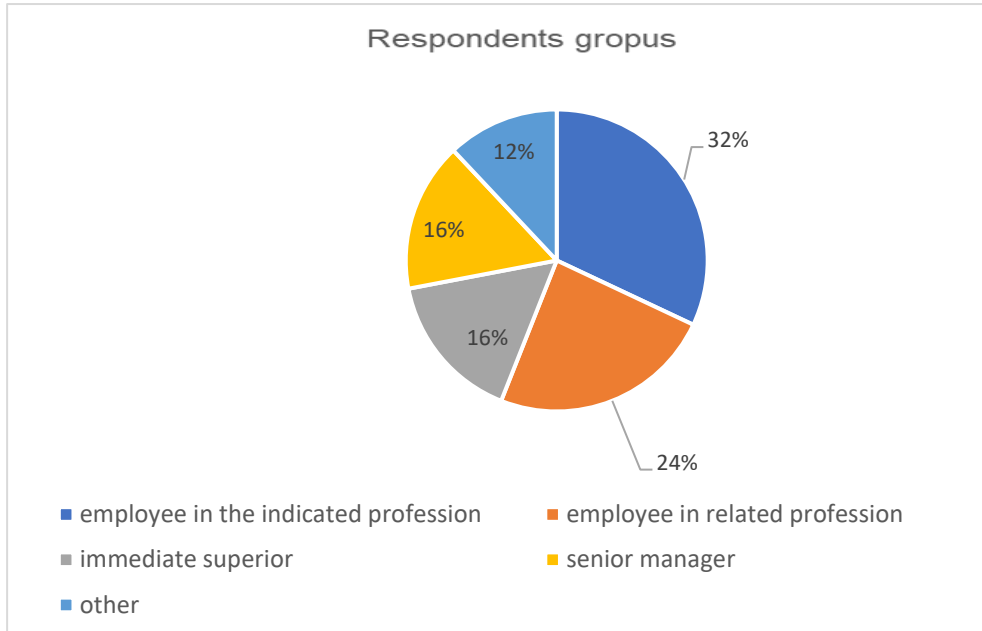
38. Please provide feedback, comments and suggestions to the social competences above:

– *No one.*

ONLINE SURVEY RESULTS FOR THE COMPETENCE PROFILE METALLURGICAL ENGINEER – NON FERROUS METALS

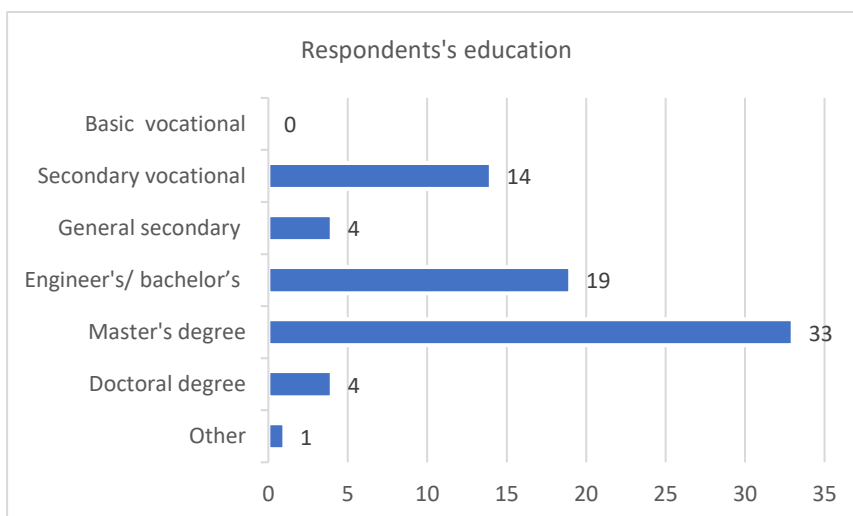
GENERAL RESULTS

75 respondents took part in the survey, divided into following groups:



	Numbers	%
employee in the indicated profession	24	32
employee in a related profession	18	24
immediate superior	12	16
senior manager	12	16
other	9	12
	75	100

The cross-section of respondents in terms of education is as follows:



	Numbers	%
Basic vocational	0	0
Secondary vocational	14	19
General secondary	4	5
Engineer's/ bachelor's	19	25
Master's degree	33	44
Doctoral degree	4	5
other	1	1
	75	100

Assessment of professional skills and social competence

The respondent, who is an employee of the surveyed profession, was asked to assign the level of individual professional and social skills characterizing this profession, observed in the respondent's opinion in himself and in his co-workers.

The respondent, who is the supervisor of employees performing the surveyed profession, was asked to express a similar (average) opinion in relation to the employees he manages.

In the survey, respondents rated on a 5-point Likert scale:

1. Very low
2. Low
3. Satisfactory
4. High
5. Very high

0. Not applicable

If the respondent could not take a position on a given issue, it was possible to select the "Not applicable" option. The "N/A" option has a weight of "0" and was not counted towards the average of the results.

The results for the competence profile Metallurgical Engineer – Non ferrous Metals expressed as the average of the grade were ranked below in ascending order.

Table. Metallurgical Engineer – Non ferrous Metals – results of the competency gap survey in the area of social skills and competences (n=75).

ASSESSMENT OF PROFESSIONAL SKILLS	Average score (n=75)
Plans and organises individual and team work in solving material problems in the metallurgical and copper industry, also of an interdisciplinary nature	2,9
Prepares, makes presentations and participates in discussions and seminars in the areas of non-ferrous metal engineering, fundamentals of economics, patent and copyright law	3,4
Designs technologies for the production of modern materials specific to the copper and other non-ferrous metal industries	3,4
Applies the principles of metallurgical company logistics.	3,5
Designs and improves material processing processes in the non-ferrous metals industry, particularly in the areas of traditional and modern metallurgical process engineering, copper processing and materials engineering.	3,5
Applies basic IT techniques to develop measurement results from the field of materials engineering	3,5
Directs the manufacturing processes of semi-finished copper and copper-based products and	3,6

non-ferrous metal-based multi-material composites, using various synthesis techniques	
Uses advanced information and communication techniques to solve material problems in the metallurgical and copper industries	3,6
Liaises with specialists and expert groups on difficult technical and organisational problems in the workplace	3,6
Applies knowledge of mathematics, physics and chemistry to the design of processes specific to materials and metallurgical engineering, in particular metallurgy and recycling and the processing and metallurgy of copper and other non-ferrous metals, taking into account process automation.	3,7
Applies the fundamentals of physics, mathematics and statistics necessary to interpret and process measurement data	3,7
Analyses properties and selects non-ferrous metals for technical applications	3,7
Applies the basic techniques used in materials and process research related to the processing of copper and other non-ferrous metals	3,8
Applies the principles of metallurgical company economics.	3,8
Assesses the suitability of specific test methods for determining the structure and properties of copper and other non-ferrous metals	3,8
Applies the principles of metallurgical enterprises.	3,9
Applies knowledge from the field of materials engineering to shape the properties and structure of materials from copper and other non-ferrous metals	4,0
Operates simple measuring and testing apparatus during laboratory testing of copper and other non-ferrous metals	4,0
Applies the intellectual property protection laws of metallurgical companies.	4,1
Applies health, safety and fire regulations and rules applicable to laboratory and production work.	4,3
Applies the environmental regulations and rules applicable to laboratory and production work.	4,3

Notice:

Due to the specificity of the area of activity of the company in Greece, the survey was expanded in this country to include four additional questions on professional skills. The results of the assessment of the level of mastery of these skills by employees representing a given competence profile are presented below (in contrast to the other average indicators, these four refer only to data from Greece):

ASSESSMENT OF ADDITIONAL PROFESSIONAL SKILLS (only in Greece)	Average score (n=51)
Applies specialized knowledge in tooling design and optimization across various manufacturing processes within the copper tubes plant.	3,5
Displays expertise in the selection of appropriate tooling for different stages of the manufacturing process.	3,5
Understands phase transformations and their implications in shaping the microstructure and properties of copper, copper alloys and other non-ferrous metals in the manufacturing process	3,6
Utilizes knowledge of common defects in metal processing processes, along with preventative measures, to enhance product quality and process efficiency.	3,6

ASSESSMENT OF SOCIAL COMPETENCE	Average score (n=75)
Is ready to make decisions within the scope of the tasks assigned.	3,5
Is ready to assess the risks and consequences of undertaking mining activities.	3,5
Is aware of the importance of the extractive industry for socio-economic development.	3,5
Motivates colleagues and subordinates to effectively achieve objectives, comply with regulations, implement good practices and professional ethics.	3,7

Builds and maintains good relationships with different stakeholder groups (local communities, subordinates, customers and subcontractors) by strengthening mutual trust, respect and improving communication.	3,7
Demonstrates social and entrepreneurial activity in the workplace.	3,8
Is willing to take responsibility for the tasks assigned and decisions made.	3,8
Is willing to share knowledge	3,8
Is ready to initiate actions for sustainable development.	3,8
Is flexible and willing to solve problems in the workplace.	4,0
Adheres to the principles of professional ethics.	4,1

Findings

Based on the results of the competence gap survey among selected groups of employees in the copper sector (competence profile: Metallurgical Engineer – Non ferrous Metals), the following are the professional skills and social competence whose level in the opinion of the respondents is currently the lowest (a unified threshold of the average value of the assessment of 4.0 was adopted).

It is justified to include employees in targeted educational activities developing the following skills:

PROFESSIONAL SKILLS

- Plans and organises individual and team work in solving material problems in the metallurgical and copper industry, also of an interdisciplinary nature.
- Prepares, makes presentations and participates in discussions and seminars in the areas of non-ferrous metal engineering, fundamentals of economics, patent and copyright law.
- Designs technologies for the production of modern materials specific to the copper and other non-ferrous metal industries.
- Applies the principles of metallurgical company logistics.
- Designs and improves material processing processes in the non-ferrous metals industry, particularly in the areas of traditional and modern metallurgical process engineering, copper processing and materials engineering.
- Applies basic IT techniques to develop measurement results from the field of materials engineering.
- Directs the manufacturing processes of semi-finished copper and copper-based products and non-ferrous metal-based multi-material composites, using various synthesis techniques.
- Uses advanced information and communication techniques to solve material problems in the metallurgical and copper industries.
- Liaises with specialists and expert groups on difficult technical and organisational problems in the workplace.
- Applies knowledge of mathematics, physics and chemistry to the design of processes specific to materials and metallurgical engineering, in particular metallurgy and recycling and the processing and metallurgy of copper and other non-ferrous metals, taking into account process automation.
- Applies the fundamentals of physics, mathematics and statistics necessary to interpret and process measurement data.
- Analyses properties and selects non-ferrous metals for technical applications
- Applies the basic techniques used in materials and process research related to the processing of copper and other non-ferrous metals.
- Applies the principles of metallurgical company economics.
- Assesses the suitability of specific test methods for determining the structure and properties of copper and other non-ferrous metals.
- Applies the principles of metallurgical enterprises.
- Applies specialized knowledge in tooling design and optimization across various manufacturing processes within the copper tubes plant.

- Displays expertise in the selection of appropriate tooling for different stages of the manufacturing process.
- Understands phase transformations and their implications in shaping the microstructure and properties of copper, copper alloys and other non-ferrous metals in the manufacturing process.
- Utilizes knowledge of common defects in metal processing processes, along with preventative measures, to enhance product quality and process efficiency.

SOCIAL COMPETENCE

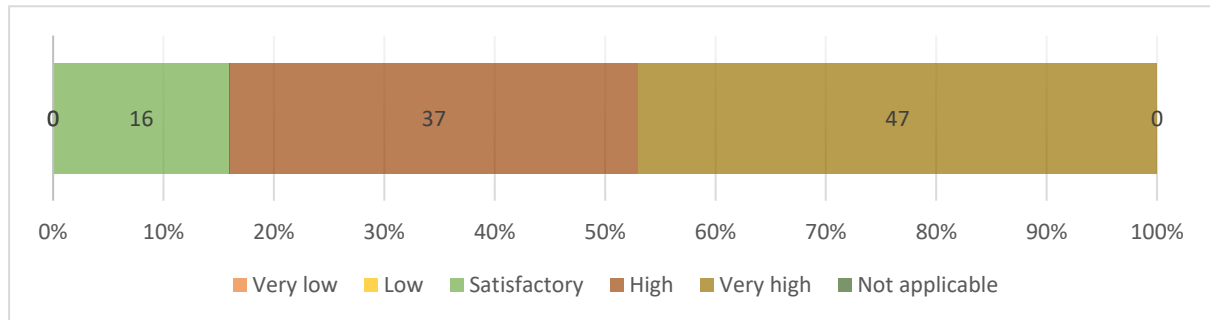
- Is ready to make decisions within the scope of the tasks assigned.
- Is ready to assess the risks and consequences of undertaking mining activities.
- Is aware of the importance of the extractive industry for socio-economic development.
- Motivates colleagues and subordinates to effectively achieve objectives, comply with regulations, implement good practices and professional ethics.
- Builds and maintains good relationships with different stakeholder groups (local communities, subordinates, customers and subcontractors) by strengthening mutual trust, respect and improving communication.
- Demonstrates social and entrepreneurial activity in the workplace.
- Is willing to take responsibility for the tasks assigned and decisions made.
- Is willing to share knowledge.
- Is ready to initiate actions for sustainable development.

See detailed results in the next section

DETAILED RESULTS

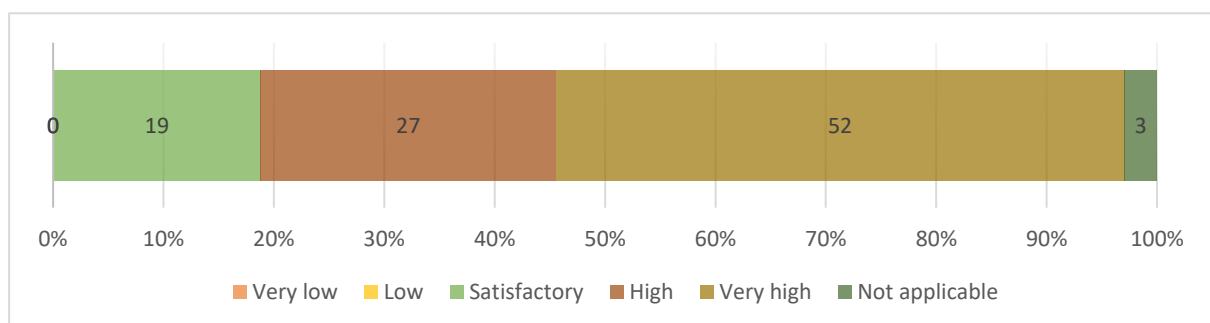
Assessment of professional skills

1. Applies health, safety and fire regulations and rules applicable to laboratory and production work.



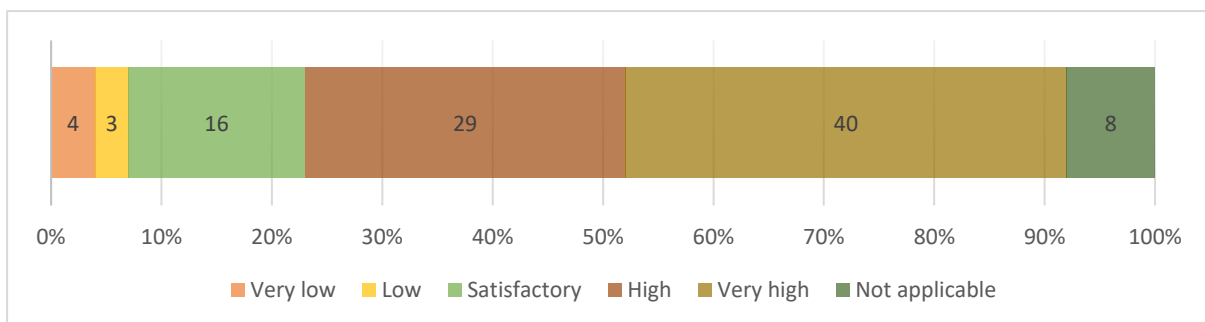
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	1	4	4	0	4,3
RESULTS [%] PL	0	0	11	44	44	0	
RESULTS [No] BY	0	0	0	2	13	0	4,9
RESULTS [%] BY	0	0	0	13	87	0	
RESULTS [No] EL	0	0	11	22	18	0	4,1
RESULTS [%] EL	0	0	22	43	35	0	
RESULTS [No]	0	0	12	28	35	0	4,3
RESULTS [%]	0	0	16	37	47	0	

2. Applies the environmental regulations and rules applicable to laboratory and production work.



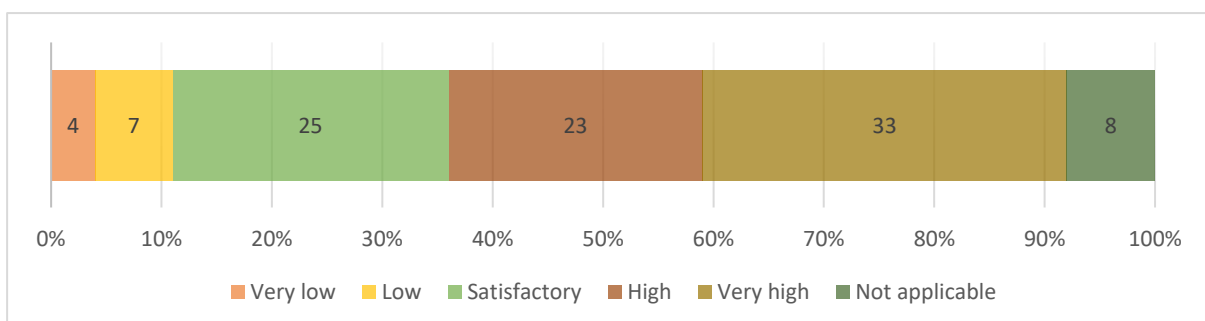
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	2	3	4	0	4,2
RESULTS [%] PL	0	0	22	33	44	0	
RESULTS [No] BY	0	0	1	1	12	1	4,8
RESULTS [%] BY	0	0	7	7	80	7	
RESULTS [No] EL	0	0	11	16	23	1	4,2
RESULTS [%] EL	0	0	22	31	45	2	
RESULTS [No]	0	0	14	20	39	2	4,3
RESULTS [%]	0	0	19	27	52	3	

3. Applies the intellectual property protection laws of metallurgical companies.



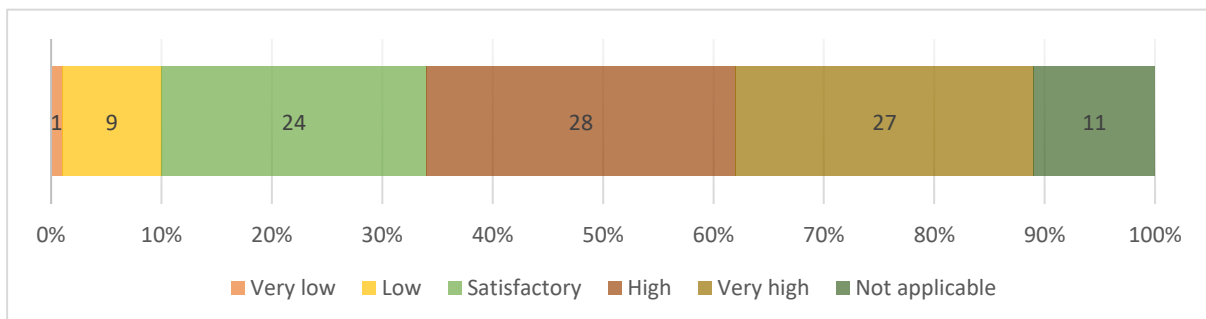
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	1	2	5	1	4,5
RESULTS [%] PL	0	0	11	22	56	11	
RESULTS [No] BY	1	1	0	1	8	4	4,2
RESULTS [%] BY	7	7	0	7	53	27	
RESULTS [No] EL	2	1	11	19	17	1	4,0
RESULTS [%] EL	4	2	22	37	33	2	
RESULTS [No]	3	2	12	22	30	6	4,1
RESULTS [%]	4	3	16	29	40	8	

4. Applies the principles of metallurgical company economics.



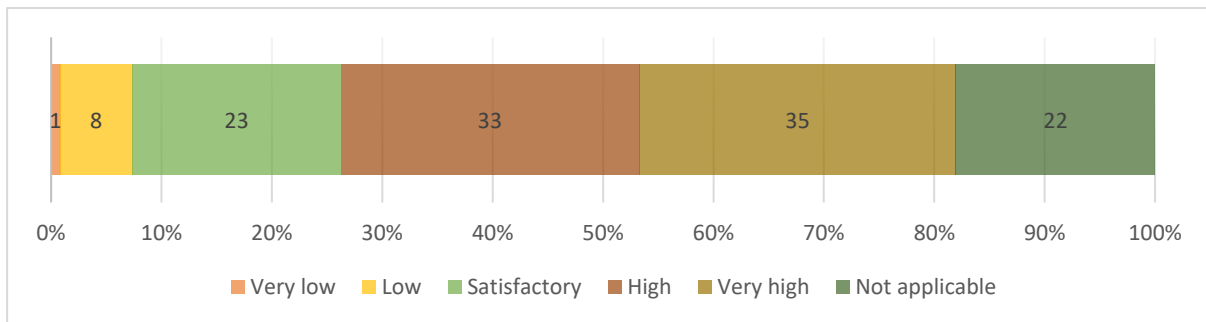
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	2	2	4	1	4,3
RESULTS [%] PL	0	0	22	22	44	11	
RESULTS [No] BY	3	1	1	0	8	2	3,7
RESULTS [%] BY	20	7	7	0	53	13	
RESULTS [No] EL	0	4	16	15	13	3	3,8
RESULTS [%] EL	0	8	31	29	25	6	
RESULTS [No]	3	5	19	17	25	6	3,8
RESULTS [%]	4	7	25	23	33	8	

5. Applies the principles of metallurgical company logistics.



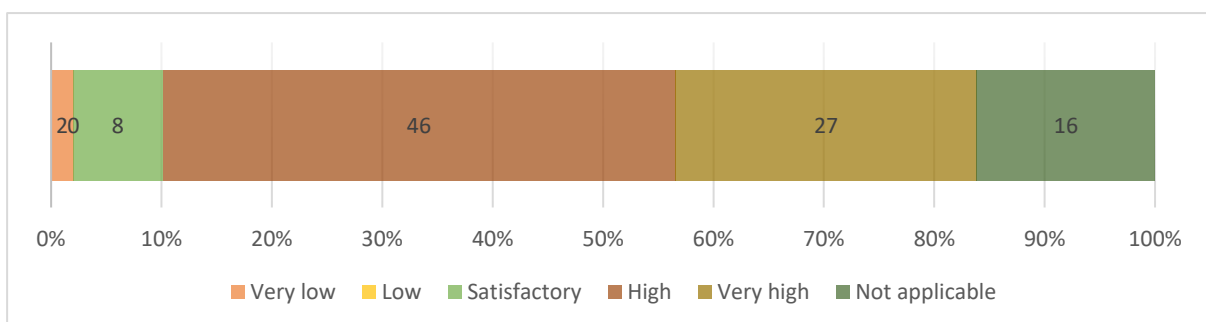
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	0	4	2	3	4,3
RESULTS [%] PL	0	0	0	44	22	33	
RESULTS [No] BY	0	2	1	0	10	2	4,4
RESULTS [%] BY	0	13	7	0	67	13	
RESULTS [No] EL	1	5	17	17	8	3	3,5
RESULTS [%] EL	2	10	33	33	16	6	
RESULTS [No]	1	7	18	21	20	8	3,8
RESULTS [%]	1	9	24	28	27	11	

6. Applies the principles of metallurgical enterprises.



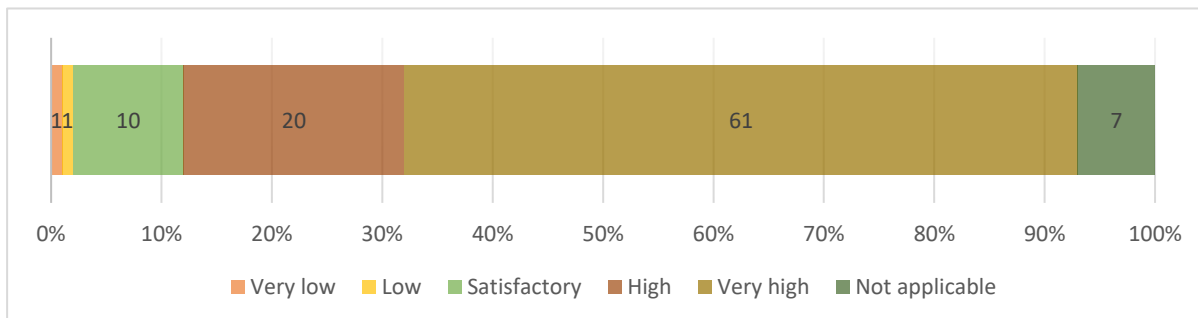
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	1	4	3	1	4,3
RESULTS [%] PL	0	0	11	44	33	11	
RESULTS [No] BY	0	1	2	0	12	0	4,5
RESULTS [%] BY	0	7	13	0	80	0	
RESULTS [No] EL	1	5	14	21	11	0	3,7
RESULTS [%] EL	2	10	27	41	22	0	
RESULTS [No]	1	6	17	25	26	1	3,9
RESULTS [%]	1	8	23	33	35	1	

7. Applies knowledge of mathematics, physics and chemistry to the design of processes specific to materials and metallurgical engineering, in particular metallurgy and recycling and the processing and metallurgy of copper and other non-ferrous metals, taking into account process automation.



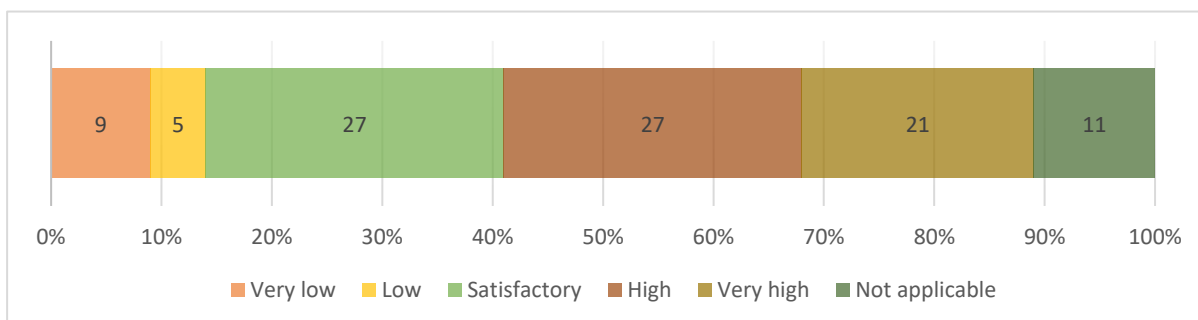
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	1	1	1	2	4	3,8
RESULTS [%] PL	0	11	11	11	22	44	
RESULTS [No] BY	5	1	2	0	7	0	3,2
RESULTS [%] BY	33	7	13	0	47	0	
RESULTS [No] EL	2	4	11	17	16	1	3,8
RESULTS [%] EL	4	8	22	33	31	2	
RESULTS [No]	7	6	14	18	25	5	3,7
RESULTS [%]	9	8	19	24	33	7	

8. Designs technologies for the production of modern materials specific to the copper and other non-ferrous metal industries.



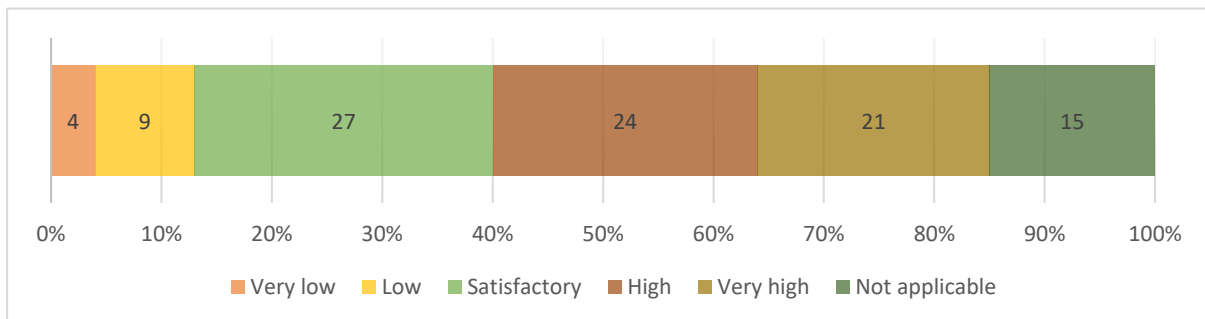
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	1	2	0	0	6	2,7
RESULTS [%] PL	0	11	22	0	0	67	
RESULTS [No] BY	6	0	2	0	5	2	2,8
RESULTS [%] BY	40	0	13	0	33	13	
RESULTS [No] EL	3	3	13	19	10	3	3,6
RESULTS [%] EL	6	6	25	37	20	6	
RESULTS [No]	9	4	17	19	15	11	3,4
RESULTS [%]	12	5	23	25	20	15	

9. Designs and improves material processing processes in the non-ferrous metals industry, particularly in the areas of traditional and modern metallurgical process engineering, copper processing and materials engineering.



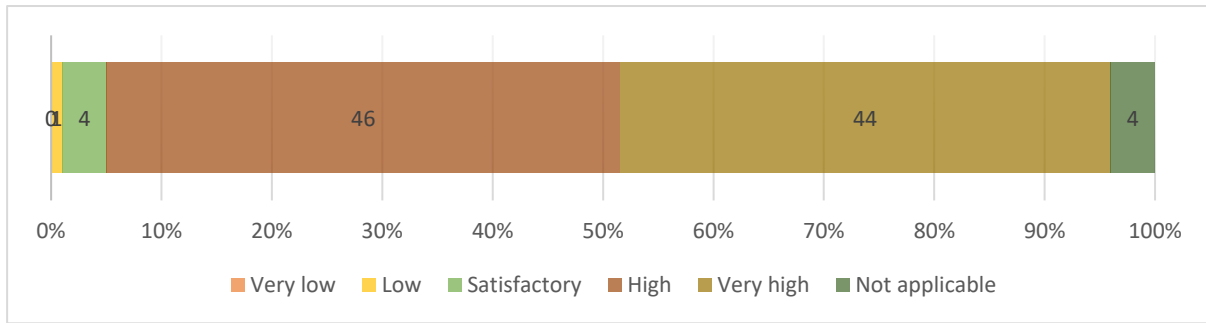
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	4	0	0	5	3,0
RESULTS [%] PL	0	0	44	0	0	56	
RESULTS [No] BY	6	0	2	0	5	2	2,8
RESULTS [%] BY	40	0	13	0	33	13	
RESULTS [No] EL	1	4	14	20	11	1	3,7
RESULTS [%] EL	2	8	27	39	22	2	
RESULTS [No]	7	4	20	20	16	8	3,5
RESULTS [%]	9	5	27	27	21	11	

10. Directs the manufacturing processes of semi-finished copper and copper-based products and non-ferrous metal-based multi-material composites, using various synthesis techniques.



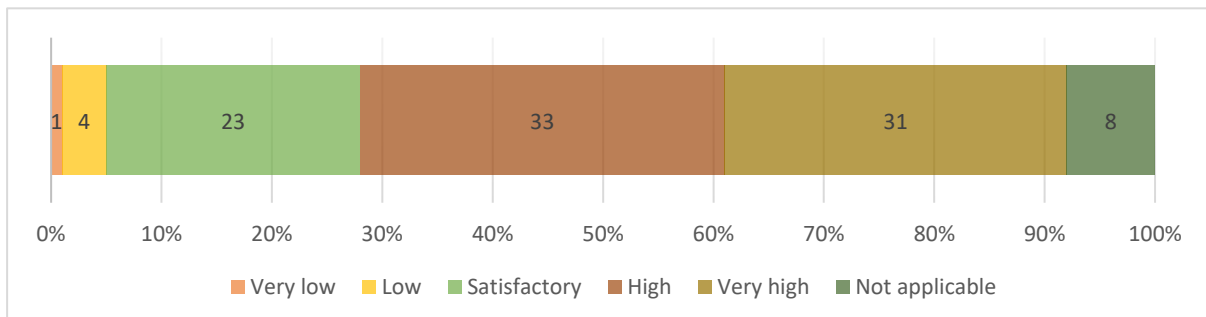
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	2	0	2	5	4,0
RESULTS [%] PL	0	1	22	0	22	56	
RESULTS [No] BY	3	0	1	1	6	4	3,6
RESULTS [%] BY	20	0	7	7	40	27	
RESULTS [No] EL	0	7	17	17	8	2	3,5
RESULTS [%] EL	0	14	33	33	16	4	
RESULTS [No]	3	7	20	18	16	11	3,6
RESULTS [%]	4	9	27	24	21	15	

11. Applies the basic techniques used in materials and process research related to the processing of copper and other non-ferrous metals.



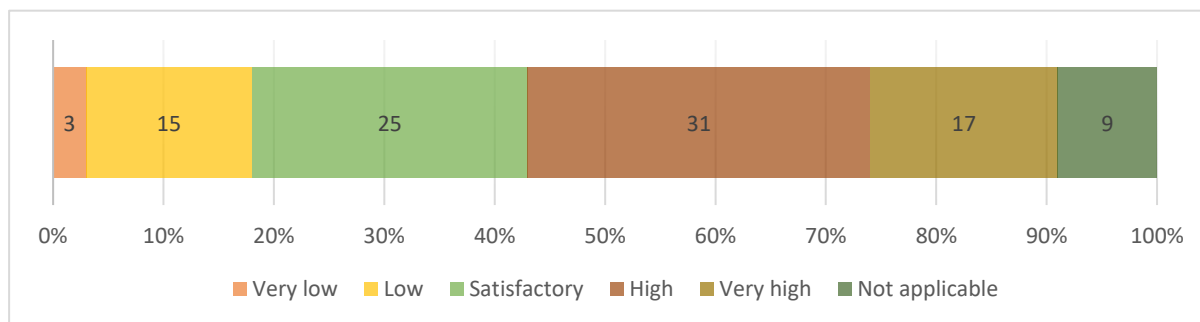
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	1	4	0	1	3	3,2
RESULTS [%] PL	0	11	44	0	11	33	
RESULTS [No] BY	1	0	2	2	10	0	4,3
RESULTS [%] BY	7	0	13	13	67	0	
RESULTS [No] EL	0	2	19	17	12	1	3,8
RESULTS [%] EL	0	4	37	33	24	2	
RESULTS [No]	1	3	25	19	23	4	3,8
RESULTS [%]	1	4	33	25	31	5	

12. Applies knowledge from the field of materials engineering to shape the properties and structure of materials from copper and other non-ferrous metals.



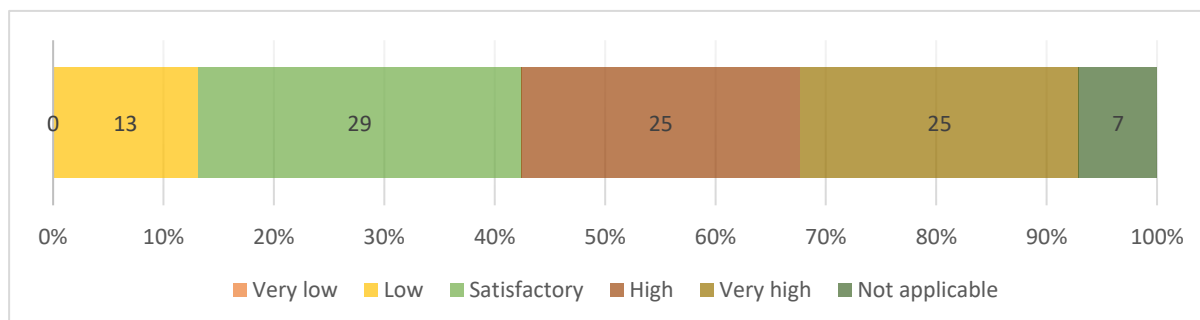
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	2	1	0	6	3,3
RESULTS [%] PL	0	0	22	11	0	67	
RESULTS [No] BY	1	0	1	2	11	0	4,5
RESULTS [%] BY	7	0	7	13	73	0	
RESULTS [No] EL	0	3	14	22	12	0	3,8
RESULTS [%] EL	0	6	27	43	24	0	
RESULTS [No]	1	3	17	25	23	6	4,0
RESULTS [%]	1	4	23	33	31	8	

13. Applies basic IT techniques to develop measurement results from the field of materials engineering.



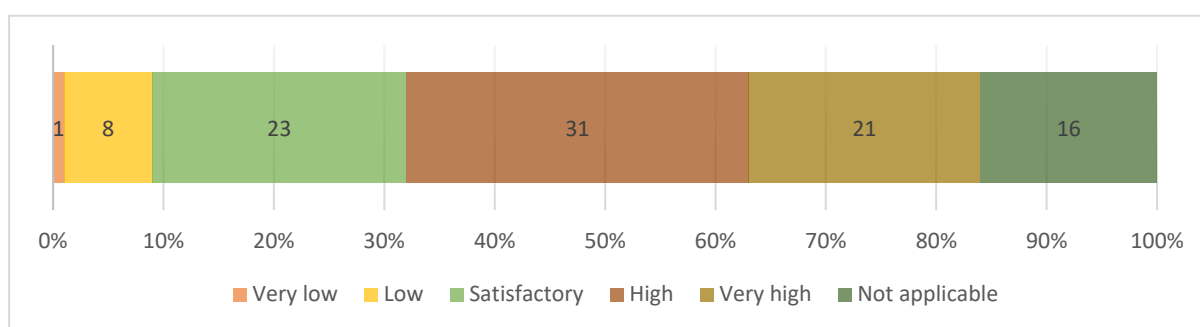
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	1	2	0	6	3,7
RESULTS [%] PL	0	0	11	22	0	67	
RESULTS [No] BY	1	0	7	0	7	0	3,8
RESULTS [%] BY	7	0	47	0	47	0	
RESULTS [No] EL	1	11	11	21	6	1	3,4
RESULTS [%] EL	2	22	22	41	12	2	
RESULTS [No]	2	11	19	23	13	7	3,5
RESULTS [%]	3	15	25	31	17	9	

14. Applies the fundamentals of physics, mathematics and statistics necessary to interpret and process measurement data.



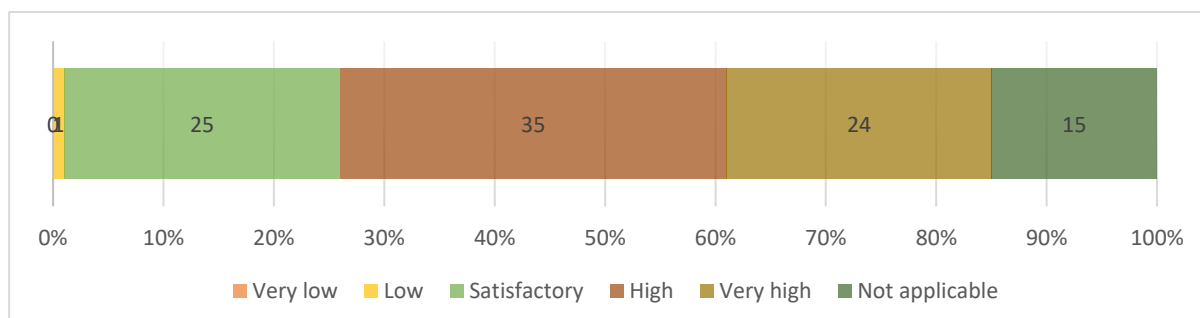
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	1	2	0	1	5	3,3
RESULTS [%] PL	0	11	22	0	11	56	
RESULTS [No] BY	0	1	6	0	8	0	4,0
RESULTS [%] BY	0	7	40	0	53	0	
RESULTS [No] EL	0	8	14	19	10	0	3,6
RESULTS [%] EL	0	16	27	37	20	0	
RESULTS [No]	0	10	22	19	19	5	3,7
RESULTS [%]	0	13	29	25	25	7	

15. Analyses properties and selects non-ferrous metals for technical applications.



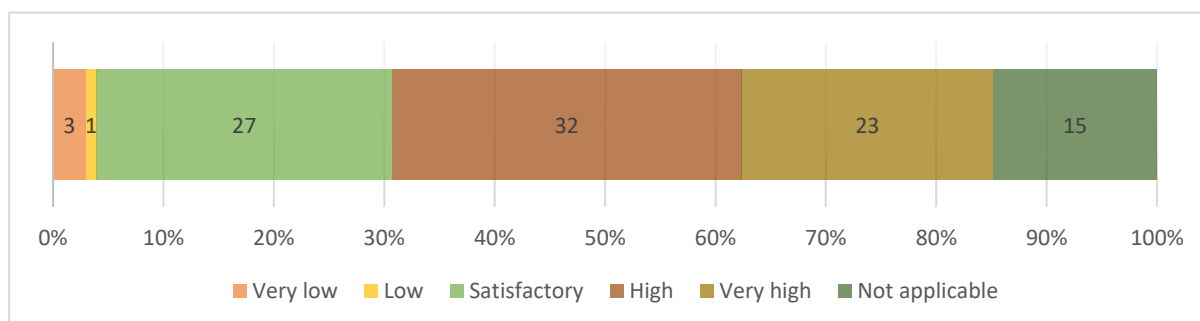
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	1	0	0	8	3,0
RESULTS [%] PL	0	0	11	0	0	89	
RESULTS [No] BY	1	1	3	0	7	3	3,9
RESULTS [%] BY	7	7	20	0	47	20	
RESULTS [No] EL	0	5	13	23	9	1	3,7
RESULTS [%] EL	0	10	25	45	18	2	
RESULTS [No]	1	6	17	23	16	12	3,7
RESULTS [%]	1	8	23	31	21	16	

16. Operates simple measuring and testing apparatus during laboratory testing of copper and other non-ferrous metals.



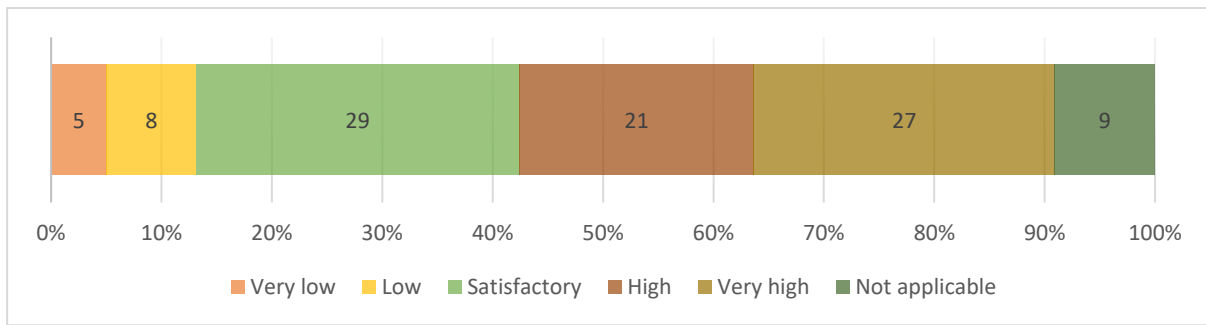
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	4	1	0	4	3,2
RESULTS [%] PL	0	0	44	11	0	44	
RESULTS [No] BY	0	0	0	1	8	6	4,9
RESULTS [%] BY	0	0	0	7	53	40	
RESULTS [No] EL	0	1	15	24	10	1	3,9
RESULTS [%] EL	0	2	29	47	20	2	
RESULTS [No]	0	1	19	26	18	11	4,0
RESULTS [%]	0	1	25	35	24	15	

17. Assesses the suitability of specific test methods for determining the structure and properties of copper and other non-ferrous metals.



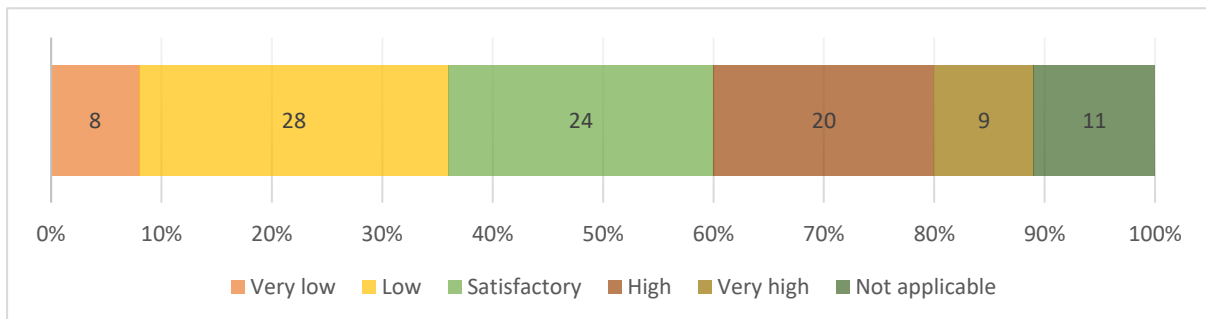
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	1	0	0	8	3,0
RESULTS [%] PL	0	0	11	0	0	89	
RESULTS [No] BY	2	0	2	2	6	3	3,8
RESULTS [%] BY	13	0	13	13	40	20	
RESULTS [No] EL	0	1	17	22	11	0	3,8
RESULTS [%] EL	0	2	33	43	22	0	
RESULTS [No]	2	1	20	24	17	11	3,8
RESULTS [%]	3	1	27	32	23	15	

18. Uses advanced information and communication techniques to solve material problems in the metallurgical and copper industries.



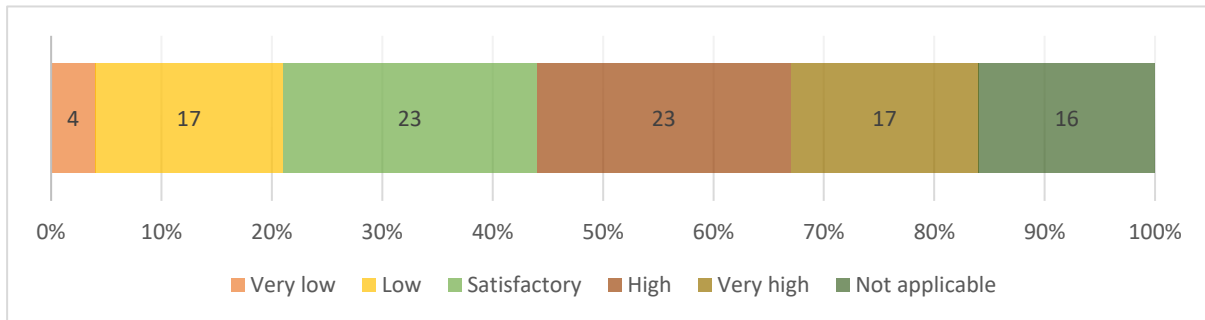
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	2	1	0	6	3,3
RESULTS [%] PL	0	0	22	11	0	67	
RESULTS [No] BY	2	1	2	1	8	1	3,9
RESULTS [%] BY	13	7	13	7	53	7	
RESULTS [No] EL	2	5	18	14	12	0	3,6
RESULTS [%] EL	4	10	35	27	24	0	
RESULTS [No]	4	6	22	16	20	7	3,6
RESULTS [%]	5	8	29	21	27	9	

19. Plans and organises individual and team work in solving material problems in the metallurgical and copper industry, also of an interdisciplinary nature.



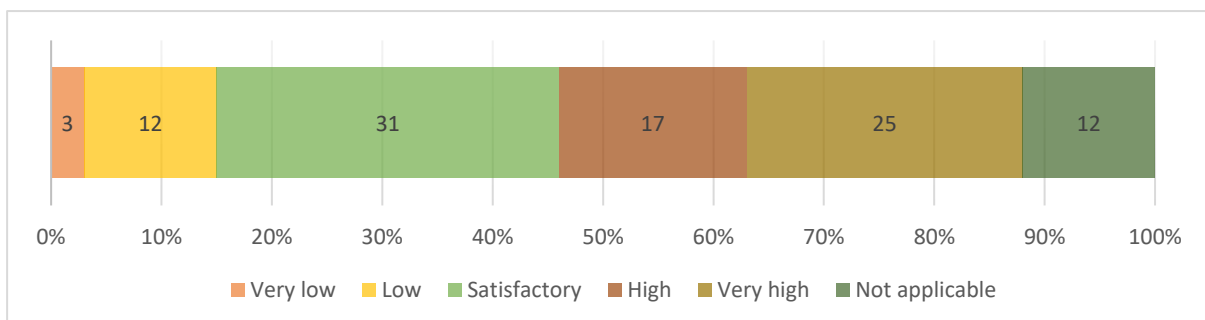
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	1	3	0	0	5	2,8
RESULTS [%] PL	0	11	33	0	0	56	
RESULTS [No] BY	2	0	0	3	7	3	4,1
RESULTS [%] BY	13	0	0	20	47	20	
RESULTS [No] EL	4	20	15	12	0	0	2,7
RESULTS [%] EL	8	39	29	24	0	0	
RESULTS [No]	6	21	18	15	7	8	2,9
RESULTS [%]	8	28	24	20	9	11	

20. Prepares, makes presentations and participates in discussions and seminars in the areas of non-ferrous metal engineering, fundamentals of economics, patent and copyright law and work organisation in non-ferrous metal plants and related industries.



SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	1	1	1	0	0	6	2,0
RESULTS [%] PL	11	11	11	0	0	67	
RESULTS [No] BY	2	2	1	1	6	3	3,6
RESULTS [%] BY	13	13	7	7	40	20	
RESULTS [No] EL	0	10	15	16	7	3	3,4
RESULTS [%] EL	0	20	29	31	14	6	
RESULTS [No]	3	13	17	17	13	12	3,4
RESULTS [%]	4	17	23	23	17	16	

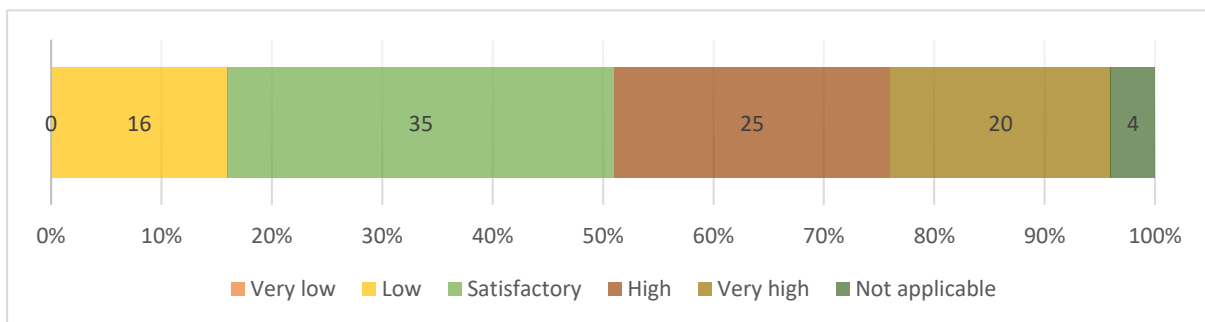
21. Liaises with specialists and expert groups on difficult technical and organisational problems in the workplace.



SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	1	1	1	1	0	5	2,5
RESULTS [%] PL	11	11	11	11	0	56	
RESULTS [No] BY	1	2	2	0	7	3	3,8
RESULTS [%] BY	7	13	13	0	47	20	
RESULTS [No] EL	0	6	20	12	12	1	3,6
RESULTS [%] EL	0	12	39	24	24	2	
RESULTS [No]	2	9	23	13	19	9	3,6
RESULTS [%]	3	12	31	17	25	12	

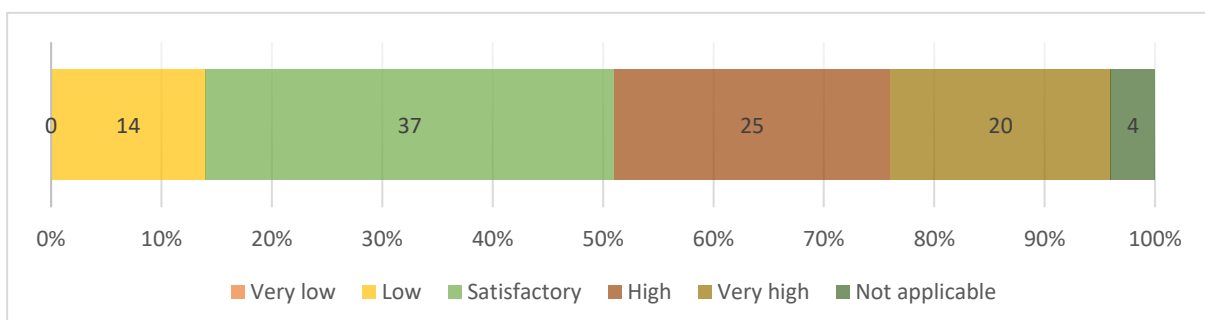
ADDITIONAL SKILLS BEING ASSESSED ONLY IN GREECE:

22. Applies specialized knowledge in tooling design and optimization across various manufacturing processes within the copper tubes plant.



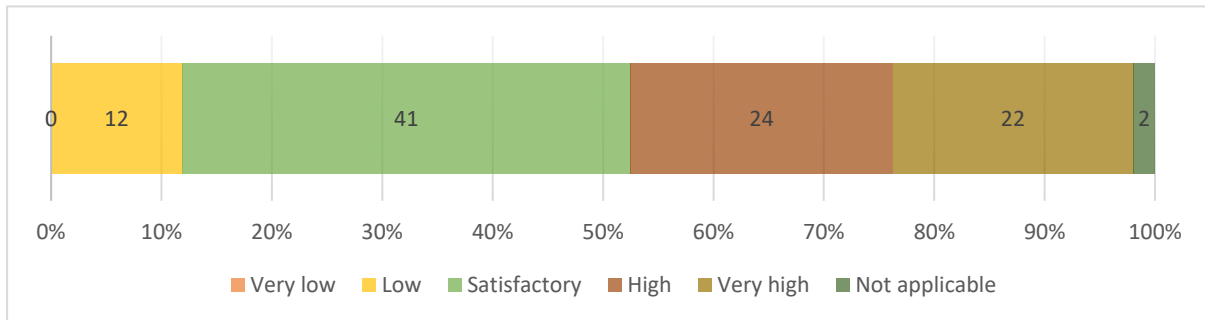
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	8	18	13	10	2	3,5
RESULTS [%]	0	16	35	25	20	4	

23. Displays expertise in the selection of appropriate tooling for different stages of the manufacturing process.



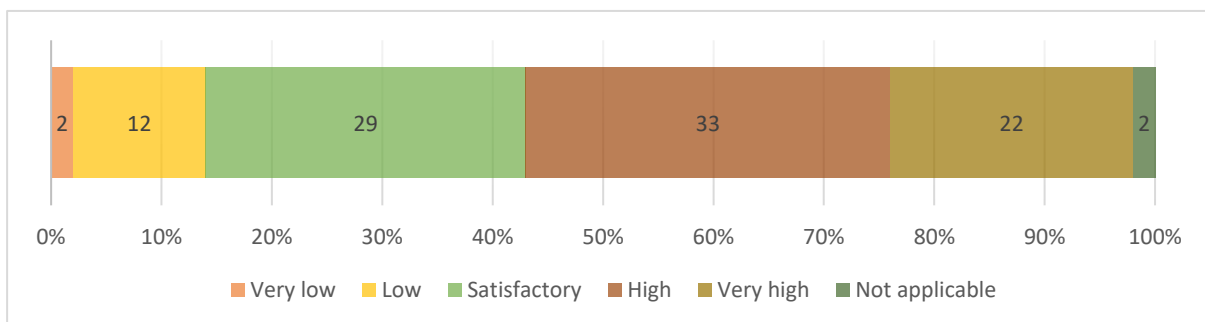
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	7	19	13	10	2	3,5
RESULTS [%]	0	14	37	25	20	4	

24. Understands phase transformations and their implications in shaping the microstructure and properties of copper, copper alloys and other non-ferrous metals in the manufacturing process.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	6	21	12	11	1	3,6
RESULTS [%]	0	12	41	24	22	2	

25. Utilizes knowledge of common defects in metal processing processes, along with preventative measures, to enhance product quality and process efficiency.



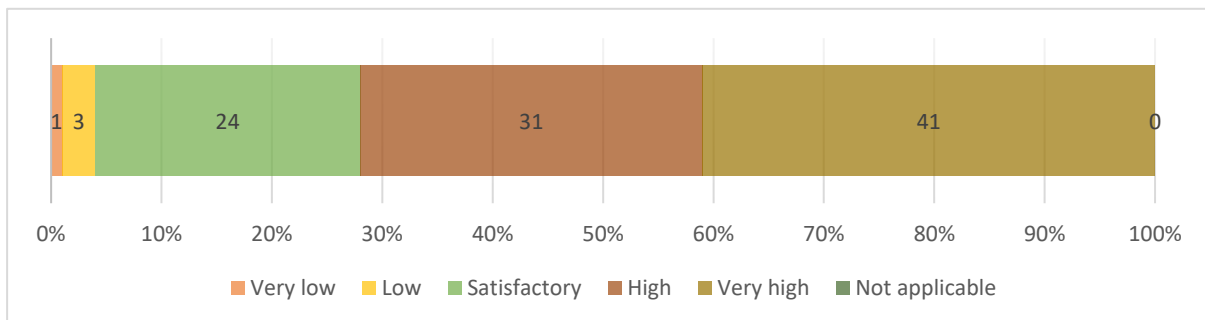
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	1	6	15	17	11	1	3,6
RESULTS [%]	2	12	29	33	22	2	

Please provide feedback, comments and suggestions to the professional skills above. If any are missing or misplaced, write them here.

- A metallurgical engineer that is primarily employed in a physical/mechanical metallurgy role should easily identify and quantify the process-microstructure-properties-performance linkages that exist within the process that she/he oversees.
- For professionals and engineers working closely with production processes, it is crucial to have a fundamental understanding of physical metallurgy principles that influence metal processing. The required level of understanding may vary based on the extent of their involvement in production. While production personnel need a profound basic knowledge of these principles, individuals in other roles can also benefit from a basic understanding of metallurgy. This knowledge can aid in areas such as Life Cycle Assessment (LCA) analysis, the integration of production KPIs with financial KPIs, and Quality Assurance (QA) KPIs.
- The involvement is needed from the production engineers for the design of new tools.
- For regular defects, increased communication is needed for problem-solving.
- The knowledge and expertise is not available throughout the company in a standardized way. Synergies towards better collaboration between departments in needed. Information Technology has to be of high priority in the future in order to minimise the non added value processes.
- Another topic that could be added: More specific knowledge in the area of applications and performance of metallic components under service and operating conditions.
- I aspire a training to Six Sigma methodology.

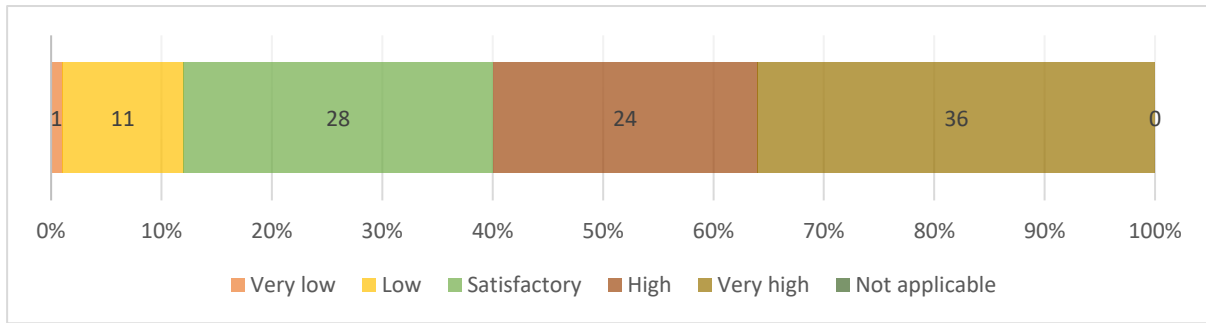
Assessment of social competence

26. Adheres to the principles of professional ethics.



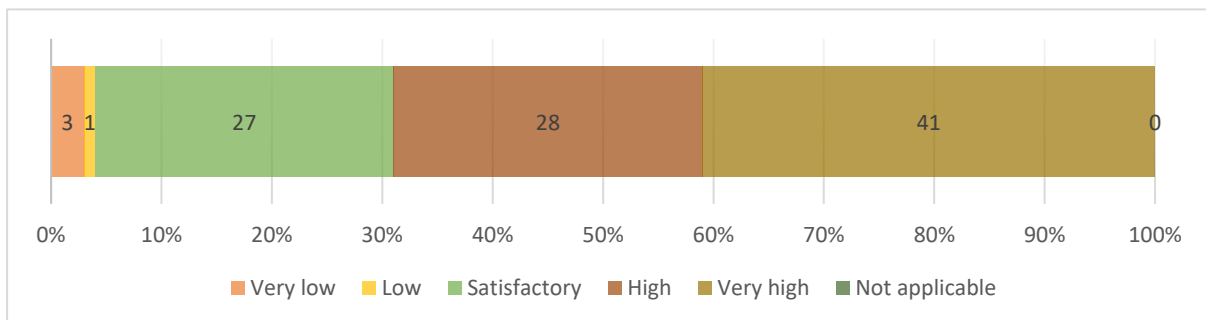
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	1	3	5	0	4,5
RESULTS [%] PL	0	0	11	33	56	0	
RESULTS [No] BY	1	1	1	0	12	0	4,4
RESULTS [%] BY	7	7	7	0	79	0	
RESULTS [No] EL	0	1	16	20	14	0	3,9
RESULTS [%] EL	0	2	31	39	27	0	
RESULTS [No]	1	2	18	23	31	0	4,1
RESULTS [%]	1	3	24	31	41	0	

27. Demonstrates social and entrepreneurial activity in the workplace.



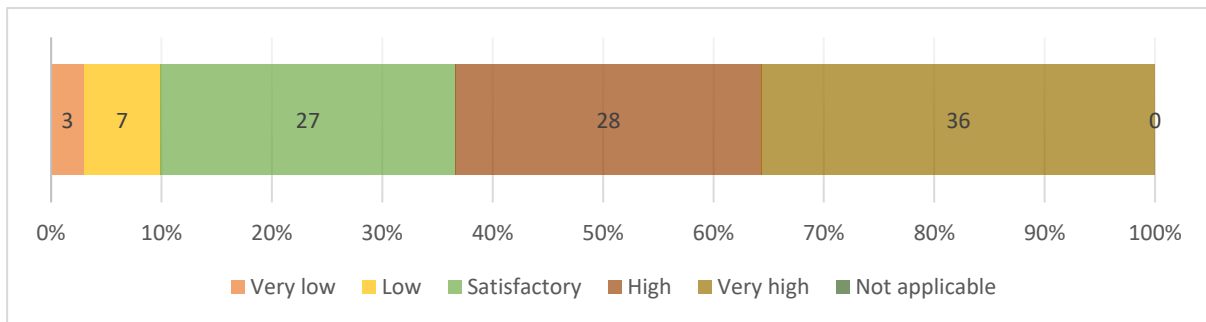
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	4	2	3	0	3,9
RESULTS [%] PL	0	0	44	22	33	0	
RESULTS [No] BY	1	0	2	1	11	0	4,4
RESULTS [%] BY	7	0	13	7	73	0	
RESULTS [No] EL	0	8	15	15	13	0	3,6
RESULTS [%] EL	0	16	29	29	25	0	
RESULTS [No]	1	8	21	18	27	0	3,8
RESULTS [%]	1	11	28	24	36	0	

29. Is flexible and willing to solve problems in the workplace.



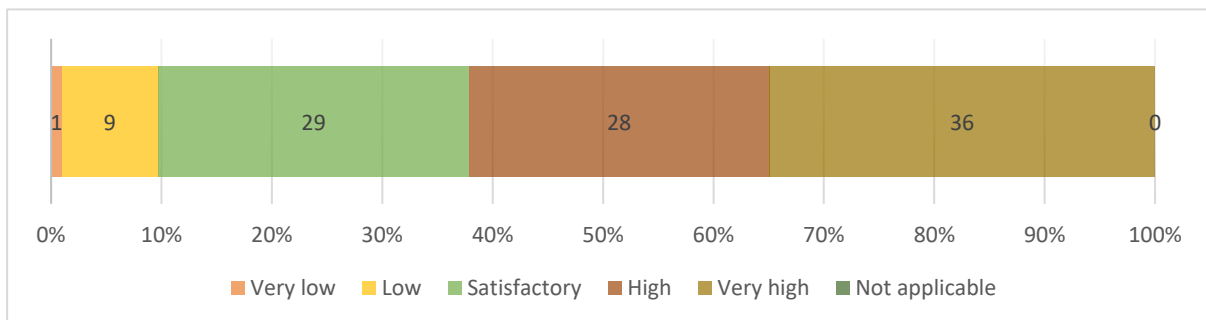
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	1	5	3	0	4,2
RESULTS [%] PL	0	0	11	56	33	0	
RESULTS [No] BY	1	0	2	1	11	0	4,4
RESULTS [%] BY	7	0	13	7	73	0	
RESULTS [No] EL	1	1	17	15	17	0	3,9
RESULTS [%] EL	2	2	33	29	33	0	
RESULTS [No]	2	1	20	21	31	0	4,0
RESULTS [%]	3	1	27	28	41	0	

30. Is ready to make decisions within the scope of the tasks assigned.



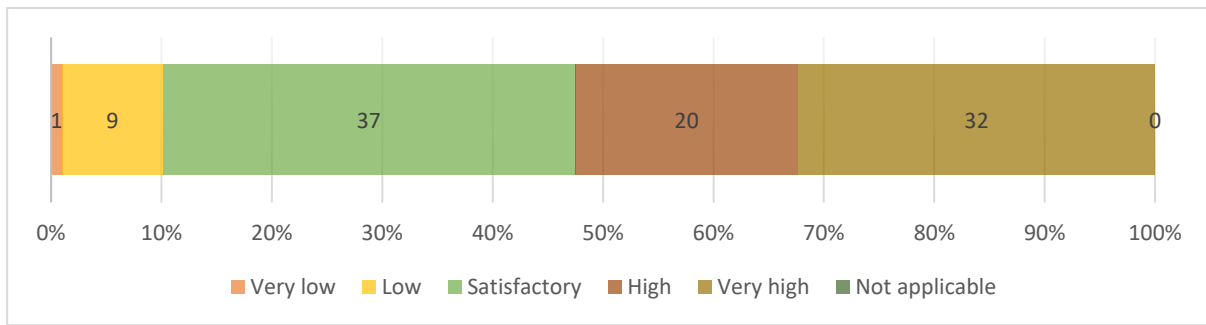
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	1	5	3	0	4,2
RESULTS [%] PL	0	0	11	56	33	0	
RESULTS [No] BY	2	0	0	2	11	0	4,3
RESULTS [%] BY	13	0	0	13	73	0	
RESULTS [No] EL	0	5	19	14	13	0	3,7
RESULTS [%] EL	0	10	37	27	25	0	
RESULTS [No]	2	5	20	21	27	0	3,9
RESULTS [%]	3	7	27	28	36	0	

31. Is willing to take responsibility for the tasks assigned and decisions made.



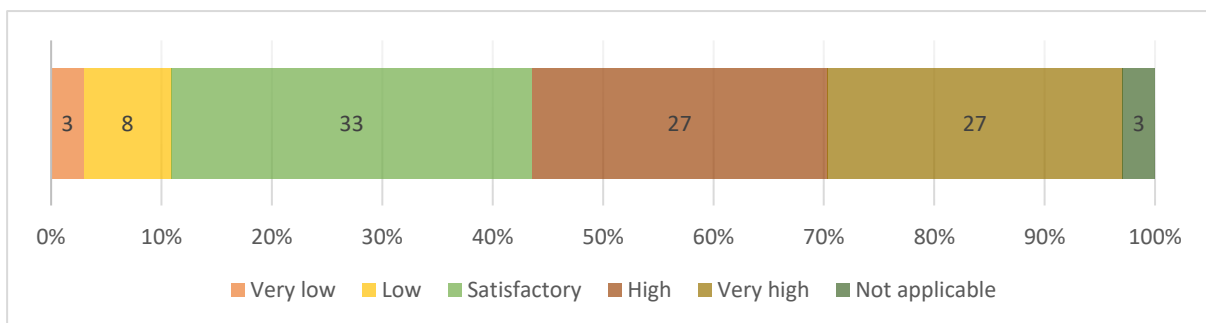
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	1	5	3	0	4,2
RESULTS [%] PL	0	0	11	56	33	0	
RESULTS [No] BY	1	1	3	0	10	0	4,1
RESULTS [%] BY	7	7	20	0	67	0	
RESULTS [No] EL	0	6	18	16	11	0	3,6
RESULTS [%] EL	0	12	35	31	22	0	
RESULTS [No]	1	7	22	21	24	0	3,8
RESULTS [%]	1	9	29	28	32	0	

32. Motivates colleagues and subordinates to effectively achieve objectives, comply with regulations, implement good practices and professional ethics.



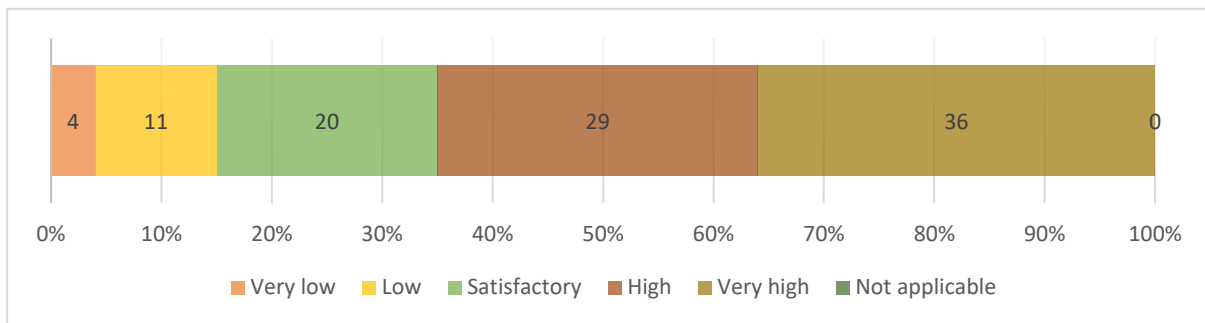
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	2	4	3	0	4,1
RESULTS [%] PL	0	0	22	44	33	0	
RESULTS [No] BY	1	2	2	0	10	0	4,1
RESULTS [%] BY	7	13	13	0	67	0	
RESULTS [No] EL	0	5	24	11	11	0	3,5
RESULTS [%] EL	0	10	47	22	22	0	
RESULTS [No]	1	7	28	15	24	0	3,7
RESULTS [%]	1	9	37	20	32	0	

33. Builds and maintains good relationships with different stakeholder groups (local communities, subordinates, customers and subcontractors) by strengthening mutual trust, respect and improving communication.



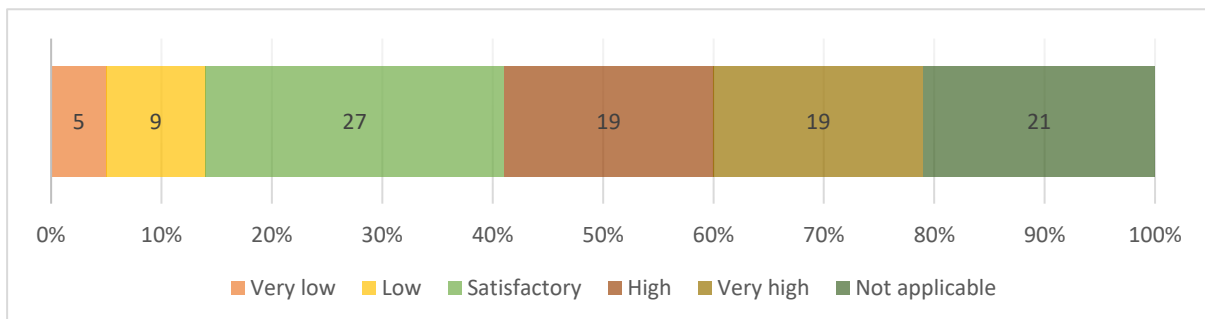
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	6	3	0	0	3,3
RESULTS [%] PL	0	0	67	33	0	0	
RESULTS [No] BY	2	1	2	0	10	0	4,0
RESULTS [%] BY	13	7	13	0	67	0	
RESULTS [No] EL	0	5	17	17	10	2	3,7
RESULTS [%] EL	0	10	33	33	20	4	
RESULTS [No]	2	6	25	20	20	2	3,7
RESULTS [%]	3	8	33	27	27	3	

34. Is willing to share knowledge.



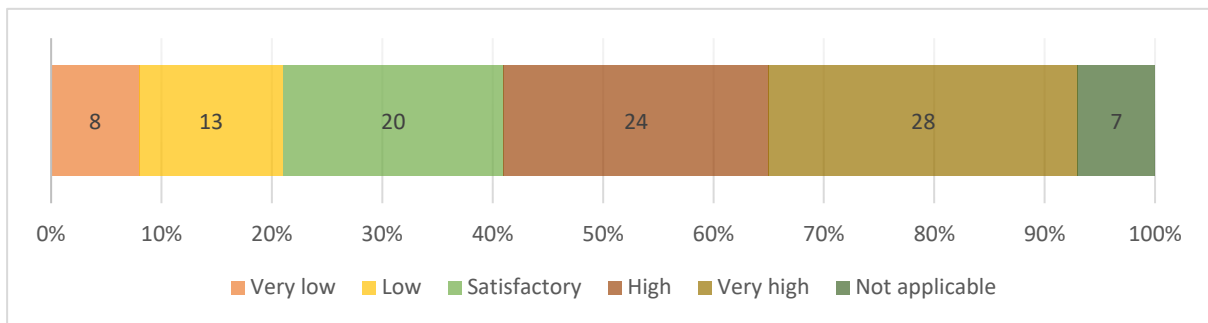
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	0	4	5	0	4,6
RESULTS [%] PL	0	0	0	44	56	0	
RESULTS [No] BY	3	0	2	0	10	0	3,9
RESULTS [%] BY	20	0	13	0	67	0	
RESULTS [No] EL	0	8	13	18	12	0	3,7
RESULTS [%] EL	0	16	25	35	24	0	
RESULTS [No]	3	8	15	22	27	0	3,8
RESULTS [%]	4	11	20	29	36	0	

35. Is ready to assess the risks and consequences of undertaking mining activities.



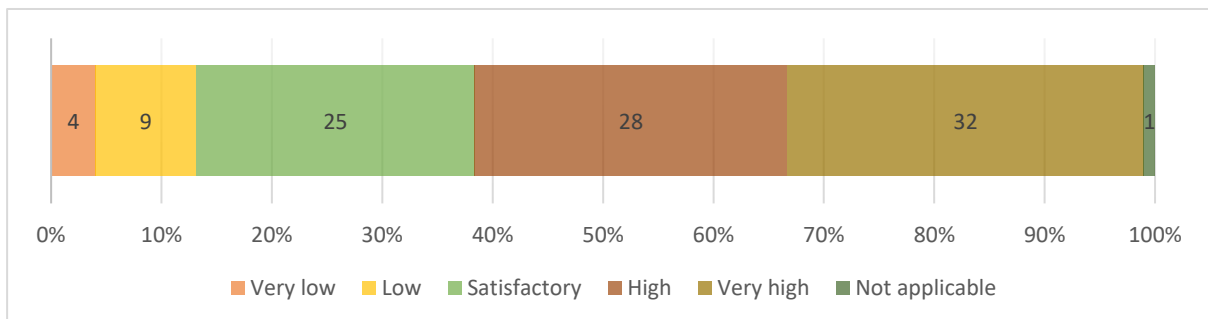
SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	4	2	2	1	3,8
RESULTS [%] PL	0	0	44	22	22	11	
RESULTS [No] BY	2	0	3	0	8	2	3,9
RESULTS [%] BY	13	0	20	0	53	13	
RESULTS [No] EL	2	7	13	12	4	13	3,2
RESULTS [%] EL	4	14	25	24	8	25	
RESULTS [No]	4	7	20	14	14	16	3,5
RESULTS [%]	5	9	27	19	19	21	

36. Is aware of the importance of the extractive industry for socio-economic development.



SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	1	5	3	0	4,2
RESULTS [%] PL	0	0	11	56	33	0	
RESULTS [No] BY	2	1	1	0	11	0	4,1
RESULTS [%] BY	13	7	7	0	73	0	
RESULTS [No] EL	4	9	13	13	7	5	3,2
RESULTS [%] EL	8	18	25	25	14	10	
RESULTS [No]	6	10	15	18	21	5	3,5
RESULTS [%]	8	13	20	24	28	7	

37. Is ready to initiate actions for sustainable development



SCALE	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No] PL	0	0	3	4	2	0	3,9
RESULTS [%] PL	0	0	33	44	22	0	
RESULTS [No] BY	2	1	1	0	11	0	4,1
RESULTS [%] BY	13	7	7	0	73	0	
RESULTS [No] EL	1	6	15	17	11	1	3,6
RESULTS [%] EL	2	12	29	33	22	2	
RESULTS [No]	3	7	19	21	24	1	3,8
RESULTS [%]	4	9	25	28	32	1	

38. Please provide feedback, comments and suggestions to the social competences above. If any are missing or misplaced, write them here:

- *Knowledge sharing and decision-making are inherently complex processes that typically rely heavily on human effort. However, when these processes are systematically mapped out step-by-step and supported by IT tools, they become significantly more efficient. This approach not only streamlines the workflow but also enhances accuracy, consistency, and collaboration across the organization. Communication is a key element in this framework, ensuring that information is effectively disseminated and understood by all stakeholders, which further supports the successful implementation and operation of these processes.*
- *Enhance the flow of information and knowledge through succession schemas for critical roles.*
- *Training (seminars) is needed for sustainability and the mining sector.*

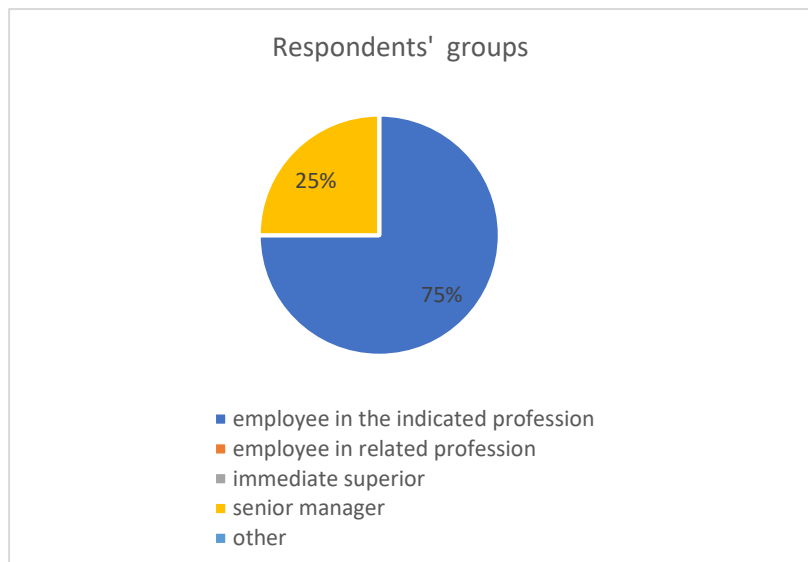
39. Please write any other comments or notes related to the survey here

- *There's no question about the position of the person answering (e.g., production, R&D, technician, etc)*
- *I think it would be beneficial to provide an initial briefing to the company staff on what a skills gap means. The questionnaire is very specialized in some cases, and not everyone can respond because they lack the necessary knowledge.*
- *There could be a couple of questions about effective communication*
- *Some questions are not related to my position (BY)*

ONLINE SURVEY RESULTS FOR THE COMPETENCE PROFILE MINING ENGINEER (SUPERVISOR)

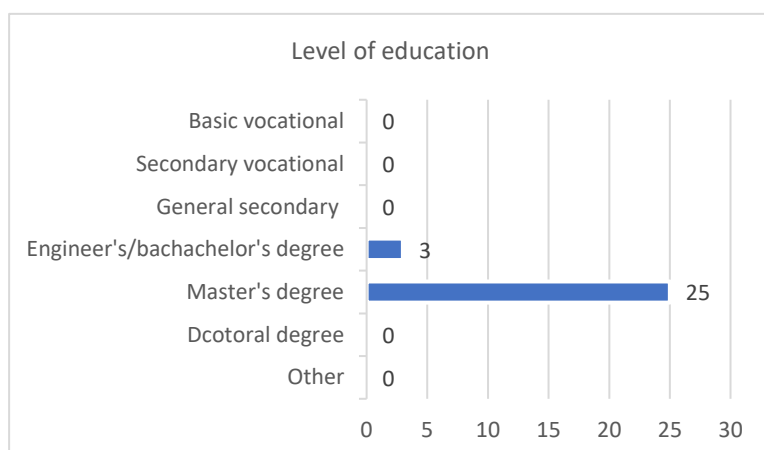
GENERAL RESULTS

28 respondents divided into following groups took part in the survey:



	Numbers	%
employee in the indicated profession	21	75
employee in a related profession	0	0
immediate superior	0	0
senior manager	7	25
other	0	0
	28	100

The cross-section of respondents in terms of education is as follows:



	Numbers	%
Basic vocational	0	0
Secondary vocational	0	0
General secondary	0	0
Engineer's/ bachelor's	3	11
Master's degree	25	89
Doctoral degree	0	0
other	0	0
	28	100

Assessment of professional skills and social competence

The respondent, who is an employee of the surveyed profession, was asked to assign the level of individual professional and social skills characterizing this profession, observed in the respondent's opinion in himself and in his co-workers.

The respondent, who is the supervisor of employees performing the surveyed profession, was asked to express a similar (average) opinion in relation to the employees he manages.

In the survey, respondents rated on a 5-point Likert scale:

1. Very low
 2. Low
 3. Satisfactory
 4. High
 5. Very high
-
0. Not applicable

If the respondent could not take a position on a given issue, it was possible to select the "Not applicable" option. The "N/A" option has a weight of "0" and was not counted towards the average of the results.

The results for the competence profile of Mining Engineer Supervisor expressed as the average of the grade were ranked below in ascending order.

Table. Mining Engineer Supervisor – results of the competency gap survey in the area of social skills and competences (n=28).

ASSESSMENT OF PROFESSIONAL SKILLS	Average score (n=28)
Supervises the transport of ore by conveyor belt to the enrichment plants	2,6
Supervises the hauling of ore to the surface with skip equipment in the mining shafts	2,9
Prepares graphical studies and presentations using selected computer programmes, including those supporting the planning, implementation and evaluation of the effects of sourcing activities	3,2
Plans mining works using appropriate computer software	3,5
Supervises the crushing of large lumps of rock (oversize) on the branch dump crag	3,6
Supervises the transport of ore by belt conveyors (or rail transport) to the crusher chambers at the shaft retention tanks	3,6
Counteracts water hazards (manifested particularly during shaft sinking)	3,6
Prepares (independently or as part of a team) basic technical documentation related to the extraction of raw materials, including: deposit exploitation design, deposit development	3,7

concept, work schedule, simplified economic analysis, etc.	
Applies the principles of mining company economic	3,8
Counteracts thermal hazards by using technical solutions to ensure an appropriate microclimate	3,9
Applies the environmental regulations and rules applicable to laboratory and production work	4,0
Applies the intellectual property protection laws of mining companies	4,0
Applies the principles of mining company logistic	4,0
Supervises and controls the quality of blast hole drilling and arming the holes with explosive charges	4,0
Counteracts the dangers of drowning during the mining process, the technical protection of the mine as well as the organisation of the work	4,0
Applies the principles of mining enterprises	4,2
Reads surveying, geological, drilling and geophysical documentation	4,2
Oversees and controls the quality of the stripping in the faces and pits	4,2
Applies health, safety and fire regulations and rules applicable to laboratory and production work	4,3
Selects the appropriate machinery and equipment for the workplace depending on the dimensions and mining regulations	4,3
Supervises and controls the quality of the execution of the anchor shoring	4,3
Supervises the haulage of excavated material to branch dumps on conveyor belts	4,3
ASSESSMENT OF SOCIAL COMPETENCE	
Demonstrates social and entrepreneurial activity in the workplace	3,3
Is ready to initiate actions for sustainable development	3,7
Adheres to the principles of professional ethics	3,9
Builds and maintains good relationships with different stakeholder groups (local communities, subordinates, customers and subcontractors) by strengthening mutual trust, respect and improving communication	3,9
Is ready to assess the risks and consequences of undertaking mining activities	3,9
Is flexible and willing to solve problems in the workplace	4,0
Is willing to take responsibility for the tasks assigned and decisions made	4,0
Motivates colleagues and subordinates to effectively achieve objectives, comply with regulations, implement good practices and professional ethics	4,0
Is willing to share knowledge	4,0
Is aware of the importance of the extractive industry for socio-economic development	4,0
Is ready to make decisions within the scope of the tasks assigned	4,1

Findings

Based on the results of the competence gap survey among selected groups of employees in the copper sector (competence profile: Mining Engineer Supervisor), the following are the professional skills and social competence and whose level in the opinion of the respondents is currently the lowest (a unified threshold of the average value of the assessment of 4.0 was adopted).

It is justified to include employees in targeted educational activities developing the following skills:

PROFESSIONAL SKILLS

- Supervises the transport of ore by conveyor belt to the enrichment plants.
- Supervises the hauling of ore to the surface with skip equipment in the mining shafts.
- Prepares graphical studies and presentations using selected computer programmes, including those supporting the planning, implementation and evaluation of the effects of sourcing activities.
- Plans mining works using appropriate computer software.
- Supervises the crushing of large lumps of rock (oversize) on the branch dump crag
- Supervises the transport of ore by belt conveyors (or rail transport) to the crusher chambers at the shaft retention tanks.
- Counteracts water hazards (manifested particularly during shaft sinking).

- Prepares (independently or as part of a team) basic technical documentation related to the extraction of raw materials, including: deposit exploitation design, deposit development concept, work schedule, simplified economic analysis, etc.
- Applies the principles of mining company economics.
- Counteracts thermal hazards by using technical solutions to ensure an appropriate microclimate.

SOCIAL COMPETENCE

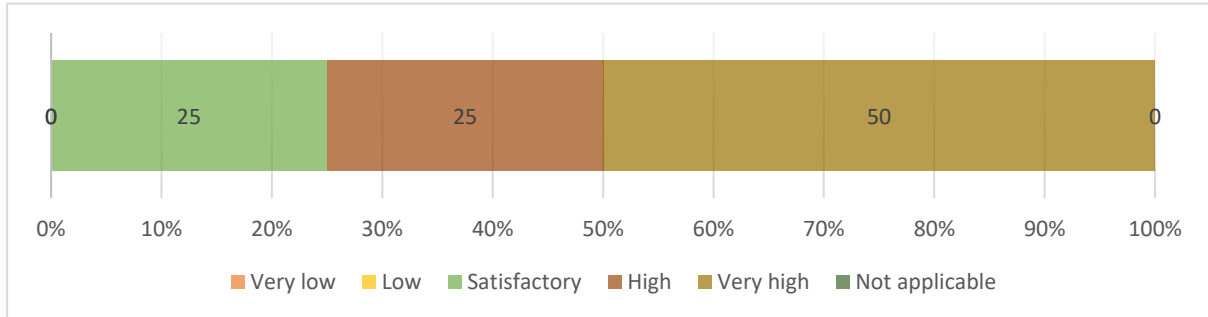
- Demonstrates social and entrepreneurial activity in the workplace.
- Is ready to initiate actions for sustainable development.
- Adheres to the principles of professional ethics.
- Builds and maintains good relationships with different stakeholder groups (local communities, subordinates, customers and subcontractors) by strengthening mutual trust, respect and improving communication.
- Is ready to assess the risks and consequences of undertaking mining activities.

See detailed results in the next section

DETAILED RESULTS

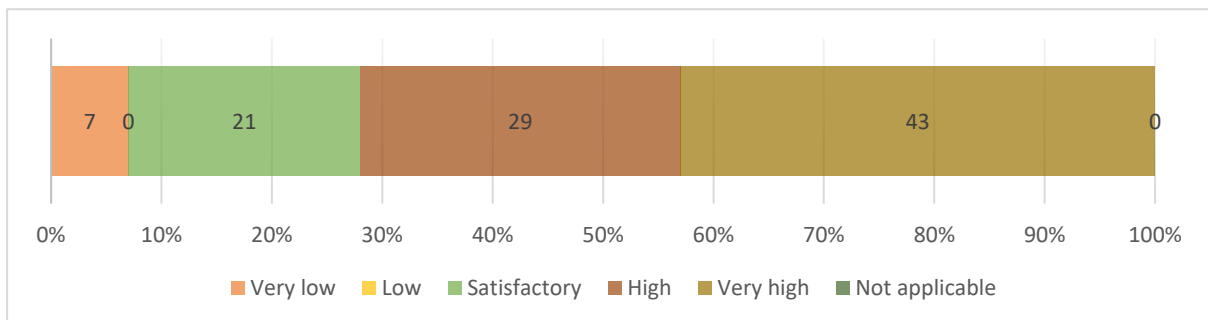
Assessment of professional skills

1. Applies health, safety and fire regulations and rules applicable to laboratory and production work.



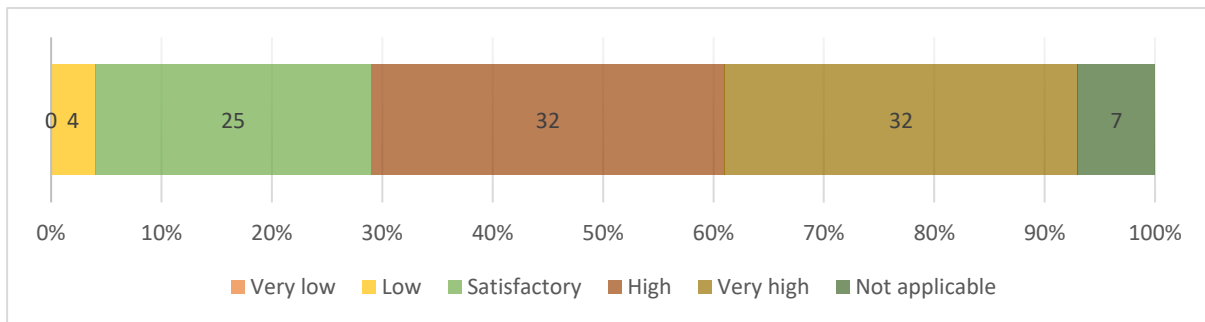
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	0	7	7	14	0	4,3
RESULTS [%]	0	0	25	25	50	0	

2. Applies the environmental regulations and rules applicable to laboratory and production work.



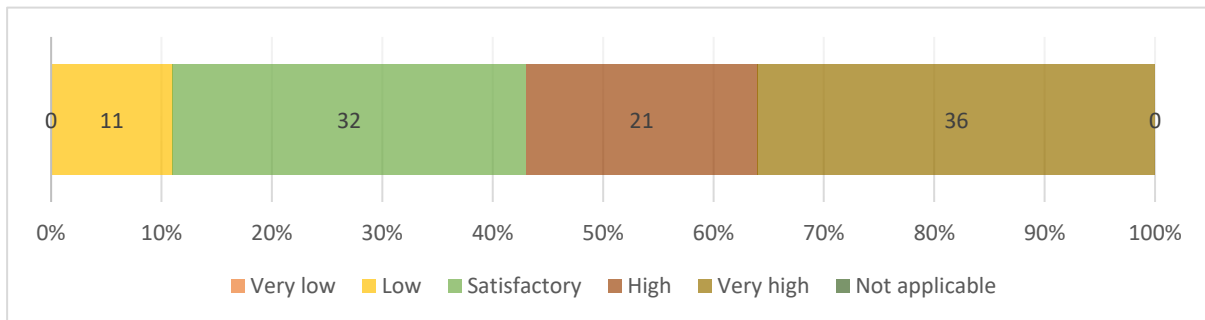
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	2	0	6	8	12	0	4,0
RESULTS [%]	7	0	21	29	43	0	

3. Applies the intellectual property protection laws of mining companies.



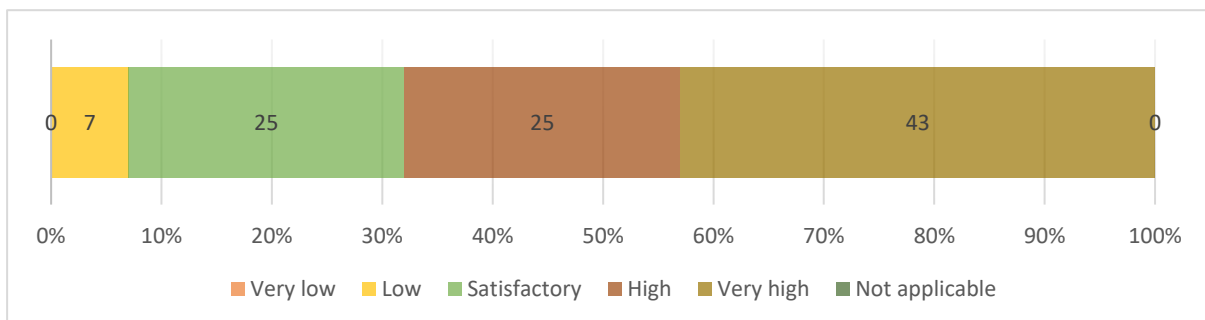
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	1	7	9	9	2	4,0
RESULTS [%]	0	4	25	32	32	7	

4. Applies the principles of mining company economics.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	3	9	6	10	0	3,8
RESULTS [%]	0	11	32	21	36	0	

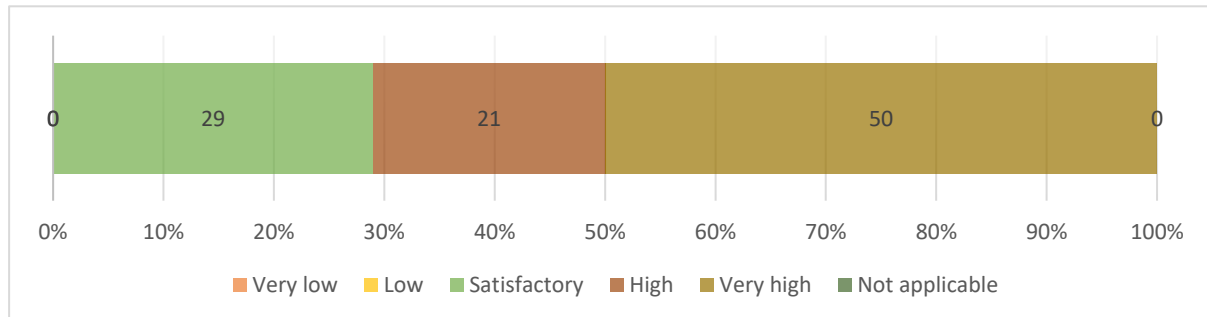
5. Applies the principles of mining company logistics..



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	7	25	25	43	0	3,8
RESULTS [%]	0	7	25	25	43	0	

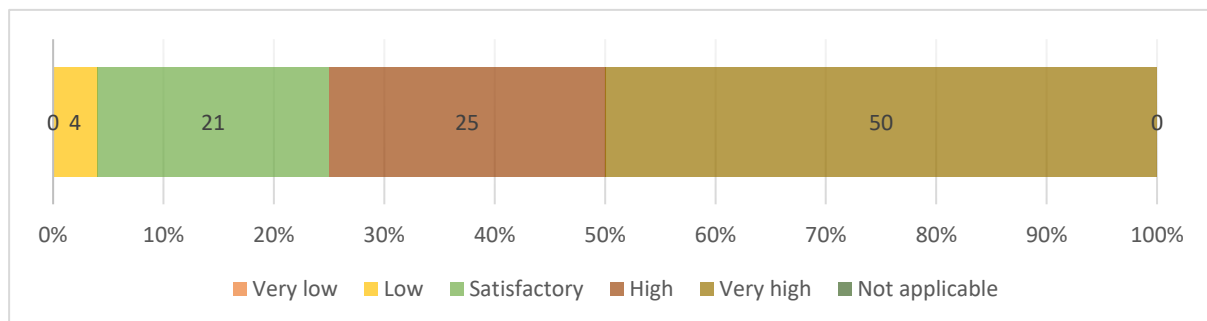
RESULTS [No]	0	2	7	7	12	0	4,0
RESULTS [%]	0	7	25	25	43	0	

6. Applies the principles of mining enterprises.



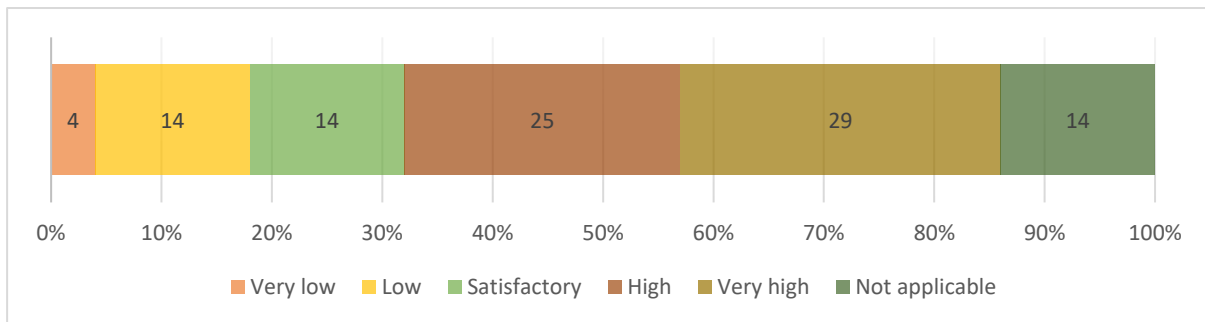
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	0	8	6	14	0	4,2
RESULTS [%]	0	0	29	21	50	0	

7. Reads surveying, geological, drilling and geophysical documentation.



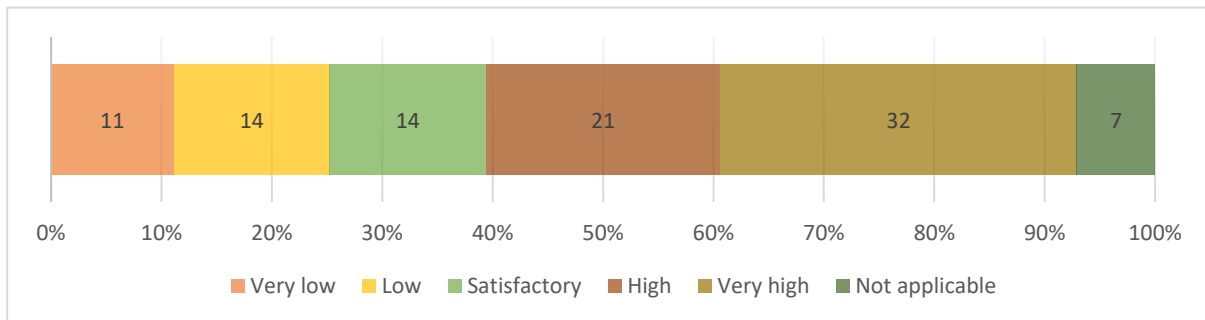
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	1	6	7	14	0	4,2
RESULTS [%]	0	4	21	25	50	0	

8. Prepares (independently or as part of a team) basic technical documentation related to the extraction of raw materials, including: deposit exploitation design, deposit development concept, work schedule, simplified economic analysis, etc.



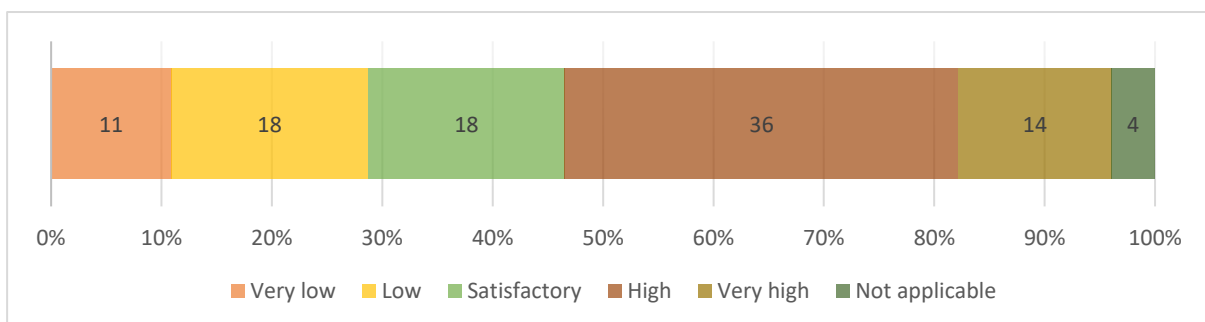
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	1	2	3	4	5	
RESULTS [No]	1	4	4	7	8	4	3,7
RESULTS [%]	4	14	14	25	29	14	

9. Plans mining works using appropriate computer software.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	1	2	3	4	5	
RESULTS [No]	3	4	4	6	9	2	3,5
RESULTS [%]	11	14	14	21	32	7	

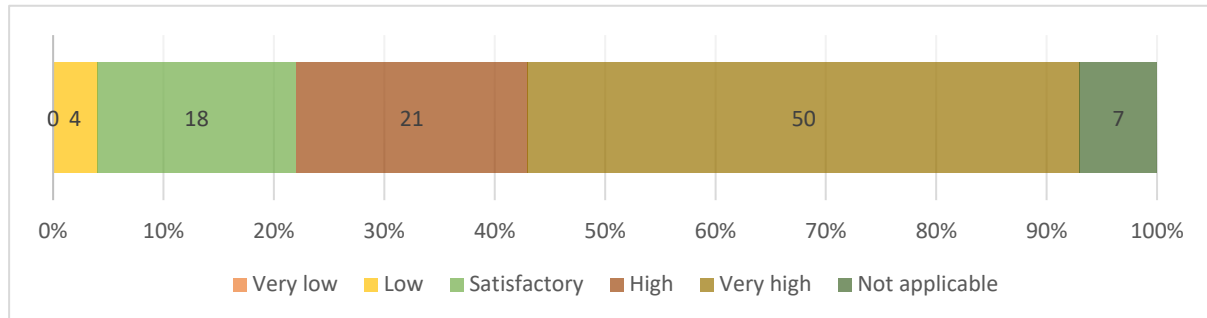
10. Prepares graphical studies and presentations using selected computer programmes, including those supporting the planning, implementation and evaluation of the effects of sourcing activities.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
1	11	18	18	36	14	4	

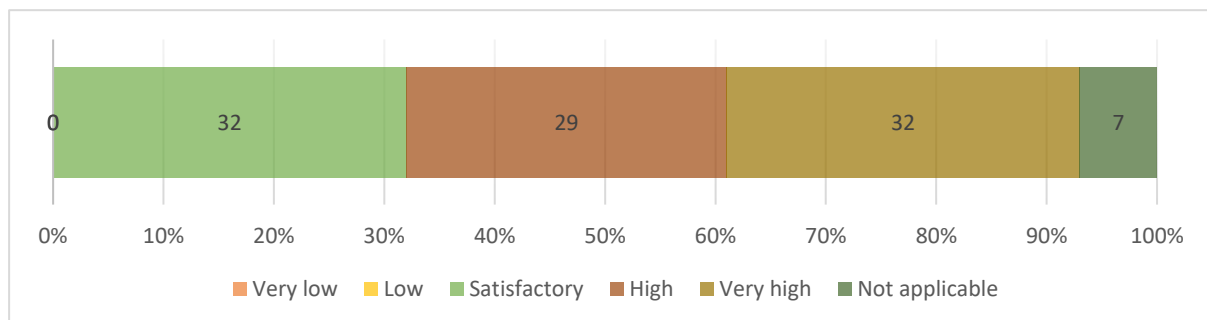
	1	2	3	4	5	0	3,2
RESULTS [No]	3	5	5	10	4	1	
RESULTS [%]	11	18	18	36	14	4	

11. Selects the appropriate machinery and equipment for the workplace depending on the dimensions and mining regulations.



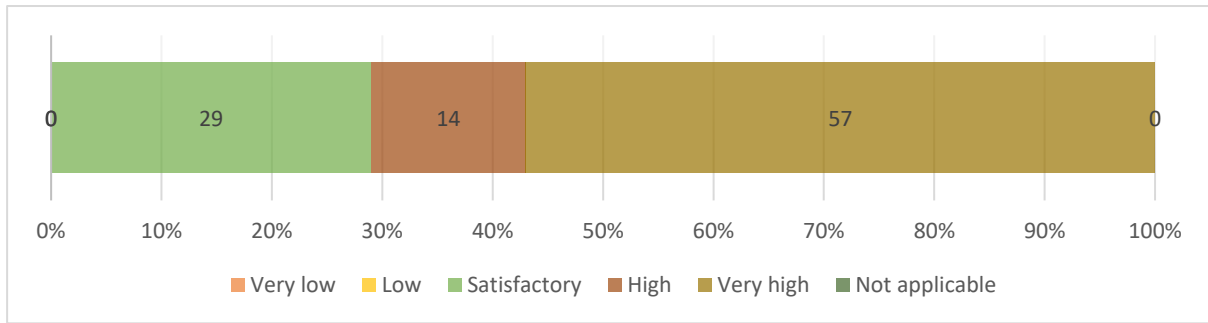
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	1	5	6	14	2	4,3
RESULTS [%]	0	4	18	21	50	7	

12. Supervises and controls the quality of blast hole drilling and arming the holes with explosive charges.



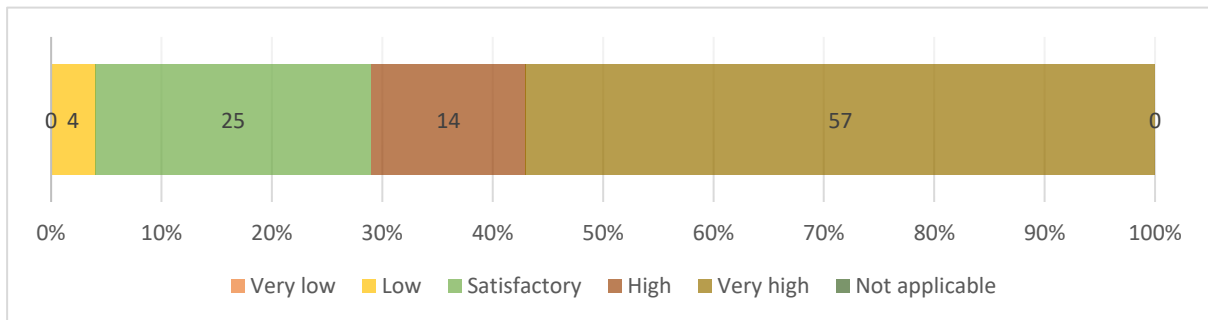
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	0	9	8	9	2	4,0
RESULTS [%]	0	0	32	29	32	7	

13. Supervises and controls the quality of the execution of the anchor shoring.



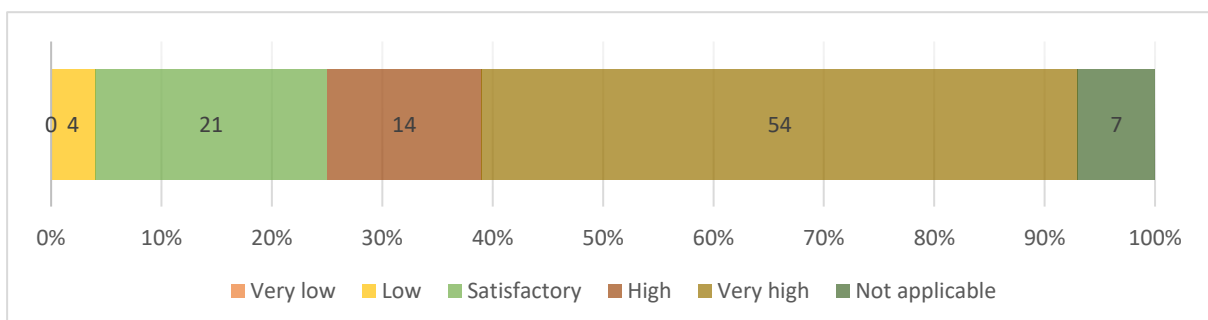
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	0	8	4	16	0	4,3
RESULTS [%]	0	0	29	14	57	0	

14. Oversees and controls the quality of the stripping in the faces and pits.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	1	7	4	16	0	4,2
RESULTS [%]	0	4	25	14	57	0	

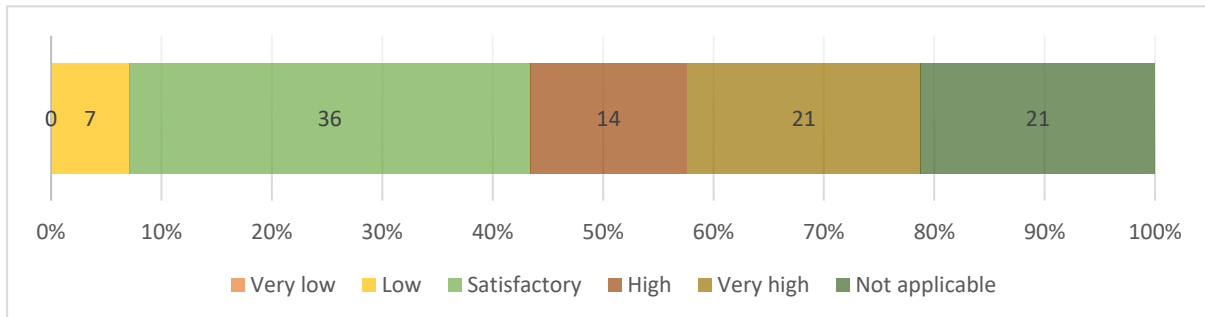
15. Supervises the haulage of excavated material to branch dumps on conveyor belts.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	1	7	4	16	3	4,2
RESULTS [%]	0	4	21	14	54	7	

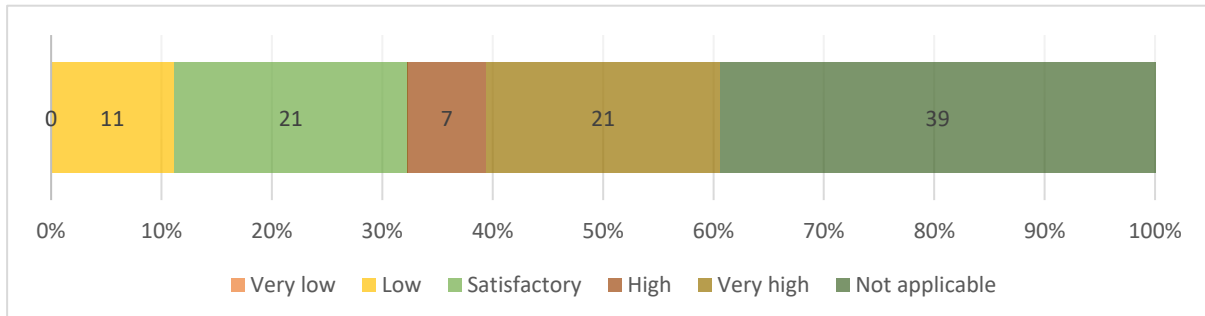
RESULTS [No]	0	1	6	4	15	2	4,3
RESULTS [%]	0	4	21	14	54	7	

16. Supervises the crushing of large lumps of rock (oversize) on the branch dump crag.



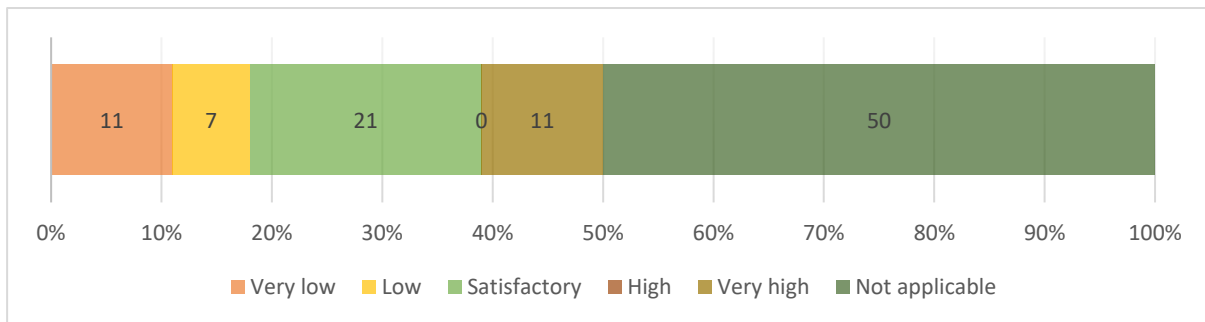
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	2	10	4	6	6	3,6
RESULTS [%]	0	7	36	14	21	21	

17. Supervises the transport of ore by belt conveyors (or rail transport) to the crusher chambers at the shaft retention tanks.



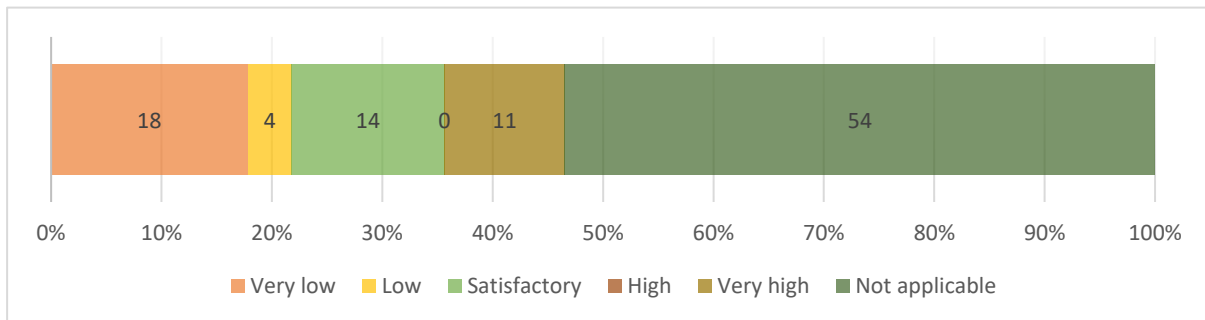
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	3	6	2	6	11	3,6
RESULTS [%]	0	11	21	7	21	39	

18. Supervises the hauling of ore to the surface with skip equipment in the mining shafts.



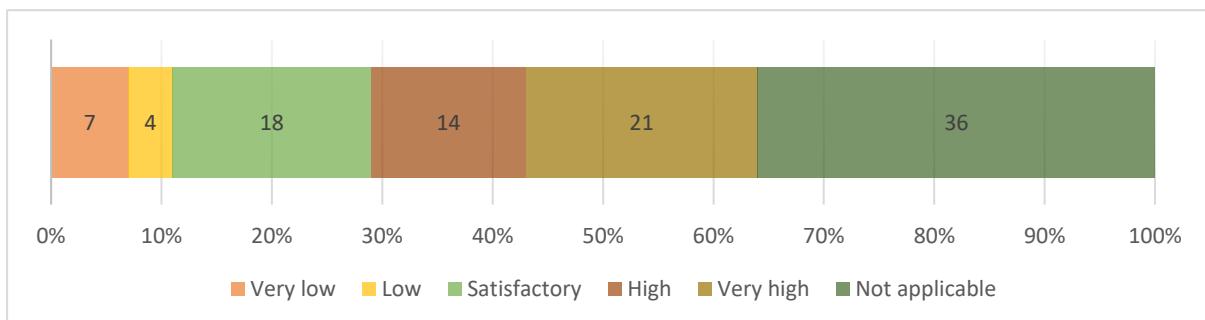
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	3	2	6	0	3	14	2,9
RESULTS [%]	11	7	21	0	11	50	

19. Supervises the transport of ore by conveyor belt to the beneficiation plants.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	5	1	4	0	3	15	2,6
RESULTS [%]	18	4	14	0	11	54	

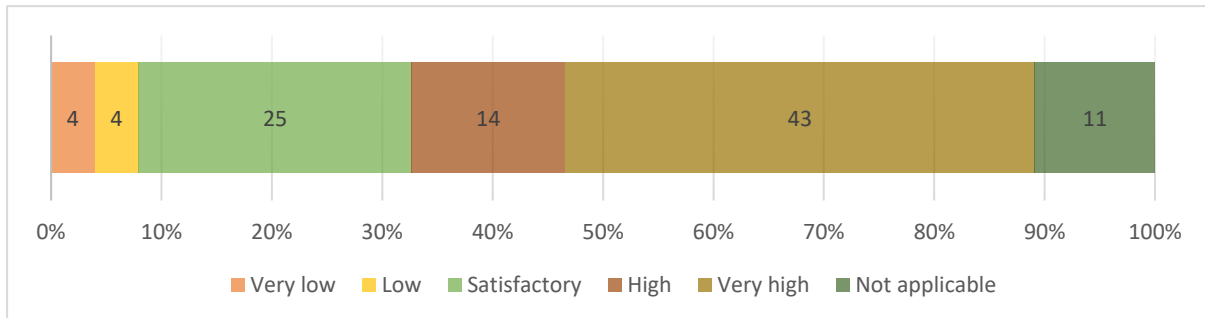
20. Counteracts water hazards (manifested particularly during shaft sinking).



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	7	4	18	14	21	36	2,6
RESULTS [%]	7	4	18	14	21	36	

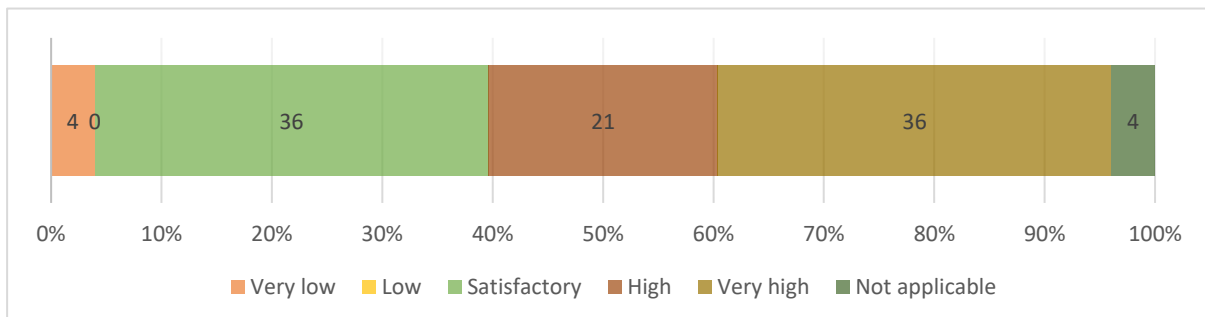
RESULTS [No]	2	1	5	4	6	10	3,6
RESULTS [%]	7	4	18	14	21	36	

21. Counteracts the dangers of drowning during the mining process, the technical protection of the mine as well as the organisation of the work.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	1	1	7	4	12	3	4,0
RESULTS [%]	4	4	25	14	43	11	

22. Counteracts thermal hazards by using technical solutions to ensure an appropriate microclimate.



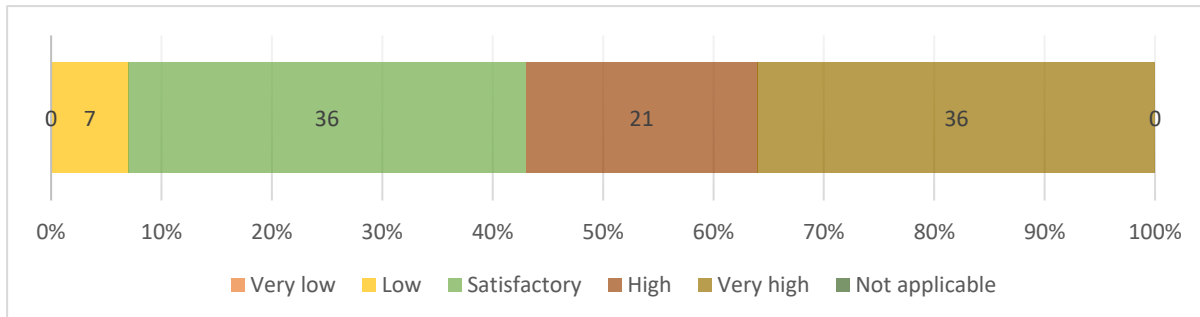
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	1	0	10	6	10	1	3,9
RESULTS [%]	4	0	36	21	36	4	

34. Please provide feedback, comments and suggestions to the professional skills above:

- The survey is very general to give an assessment of a large number of employees. You have to average the skills of employees in general, and the "range" is very large, from low-skilled workers to high-skilled workers.

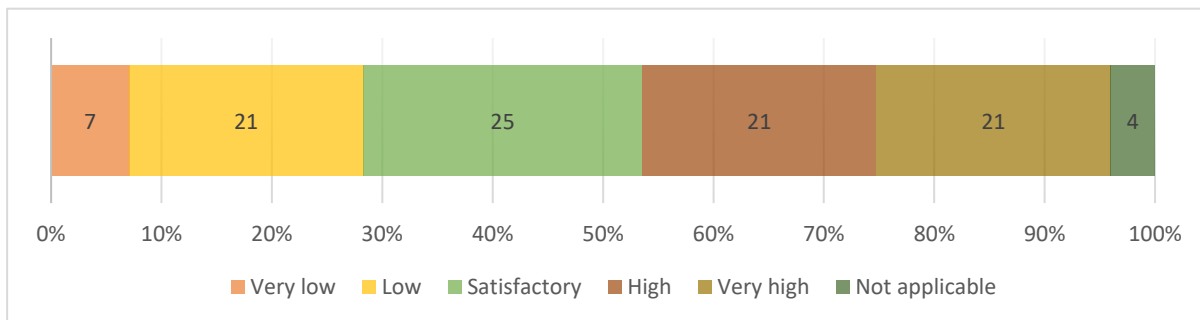
Assessment of social competence

24. Adheres to the principles of professional ethics.



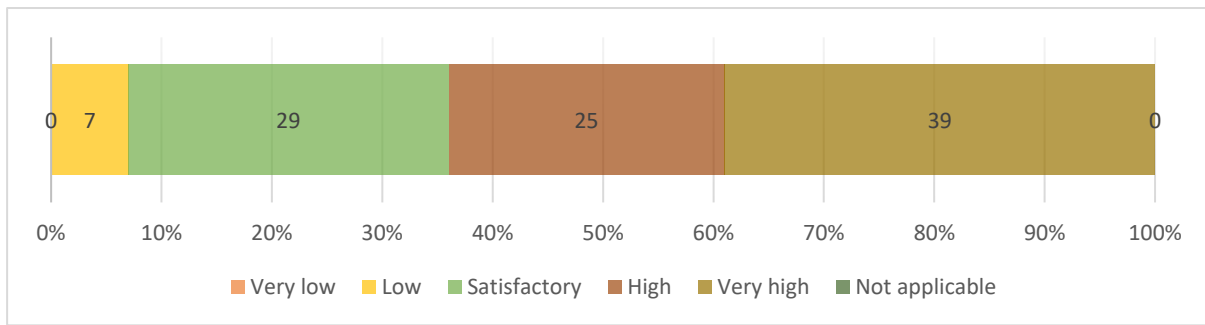
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	2	10	6	10	0	3,9
RESULTS [%]	0	7	36	21	36	0	

25. Demonstrates social and entrepreneurial activity in the workplace.



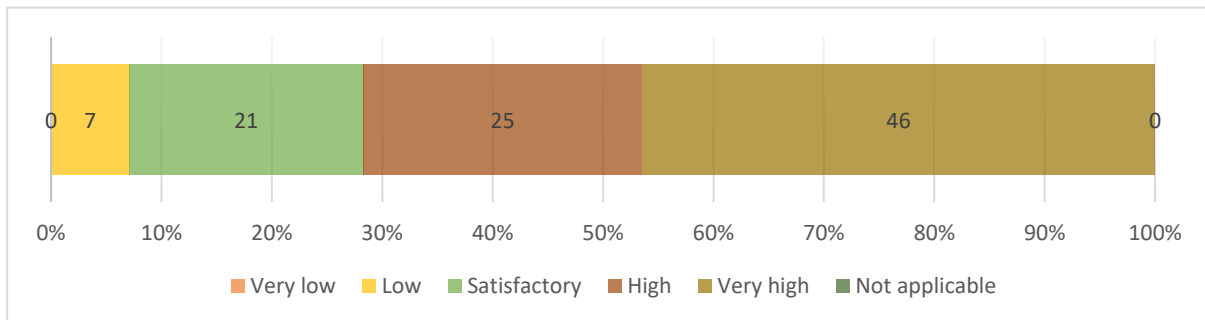
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	2	6	7	6	6	1	3,3
RESULTS [%]	7	21	25	21	21	4	

26. Is flexible and willing to solve problems in the workplace.



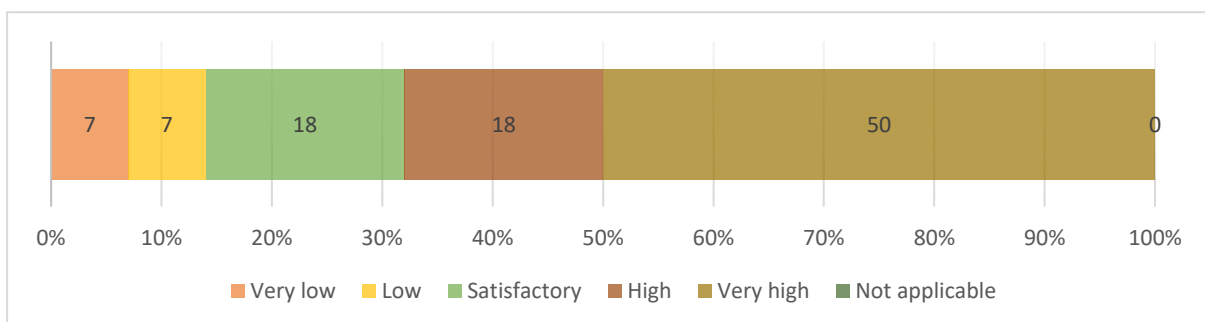
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	2	8	7	11	0	4,0
RESULTS [%]	0	7	29	25	39	0	

27. Is ready to make decisions within the scope of the tasks assigned.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	2	6	7	13	0	4,1
RESULTS [%]	0	7	21	25	46	0	

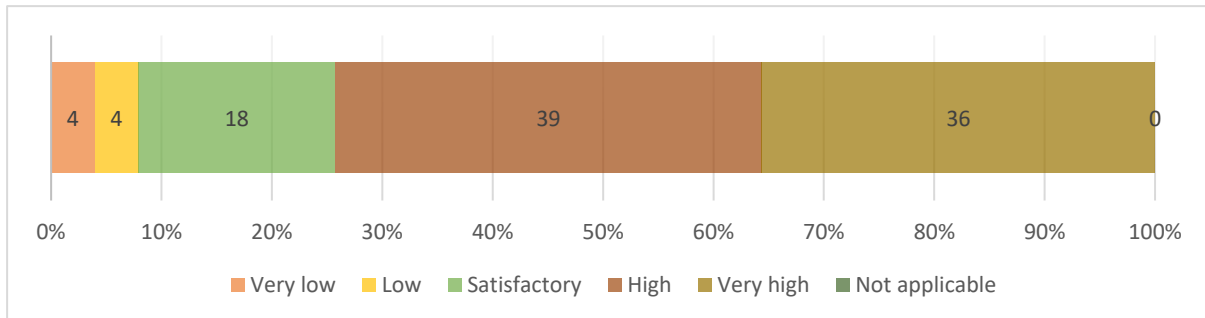
28. Is willing to take responsibility for the tasks assigned and decisions made.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	2	6	7	13	0	4,1
RESULTS [%]	0	7	21	25	46	0	

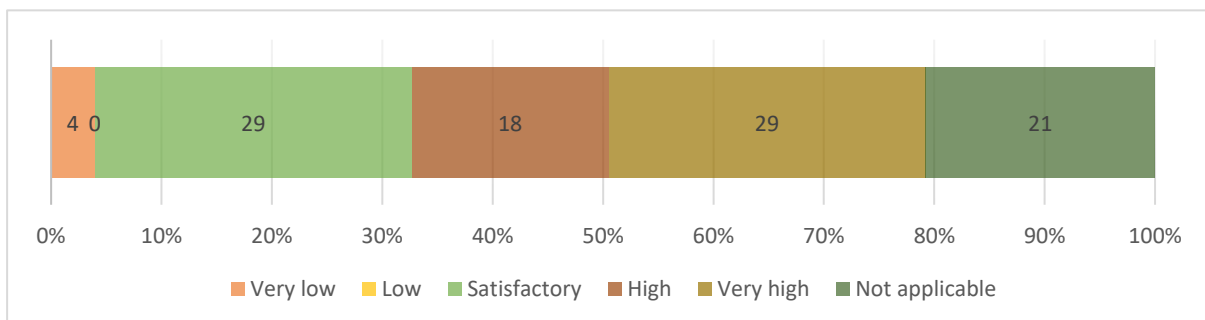
RESULTS [No]	2	2	5	5	14	0	4,0
RESULTS [%]	7	7	18	18	50	0	

29. Motivates colleagues and subordinates to effectively achieve objectives, comply with regulations, implement good practices and professional ethics.



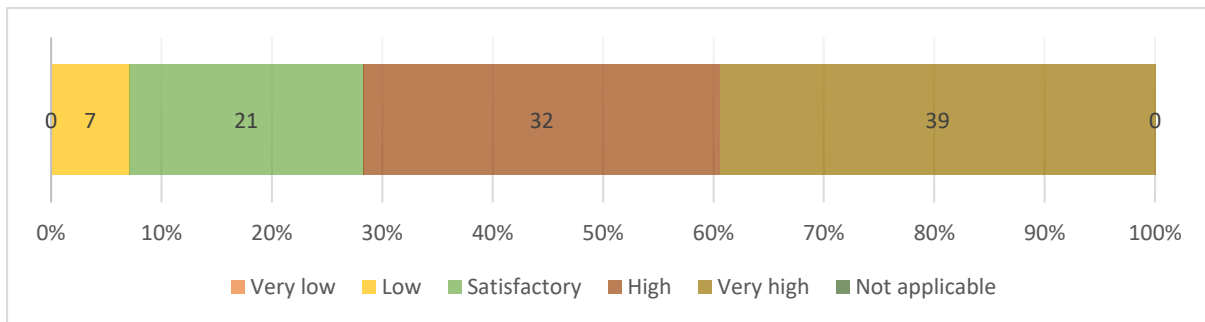
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	1	1	5	11	10	0	4,0
RESULTS [%]	4	4	18	39	36	0	

30. Builds and maintains good relationships with different stakeholder groups (local communities, subordinates, customers and subcontractors) by strengthening mutual trust, respect and improving communication.



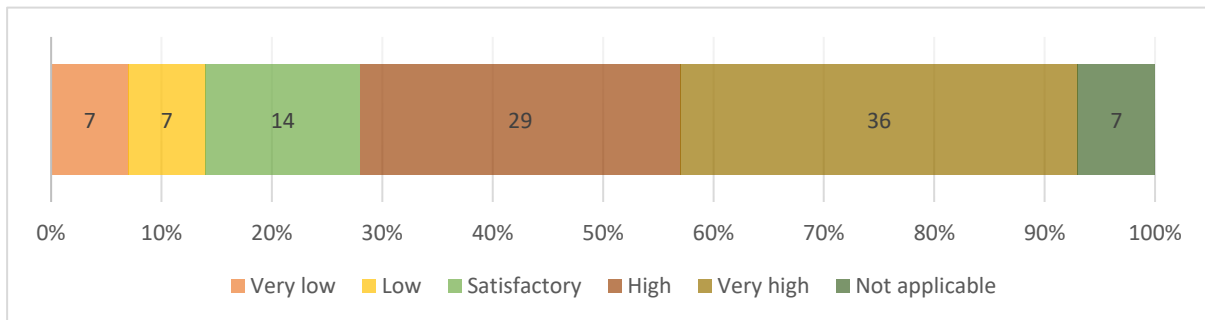
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	1	0	8	5	8	6	3,9
RESULTS [%]	4	0	29	18	29	21	

31. Is willing to share knowledge.



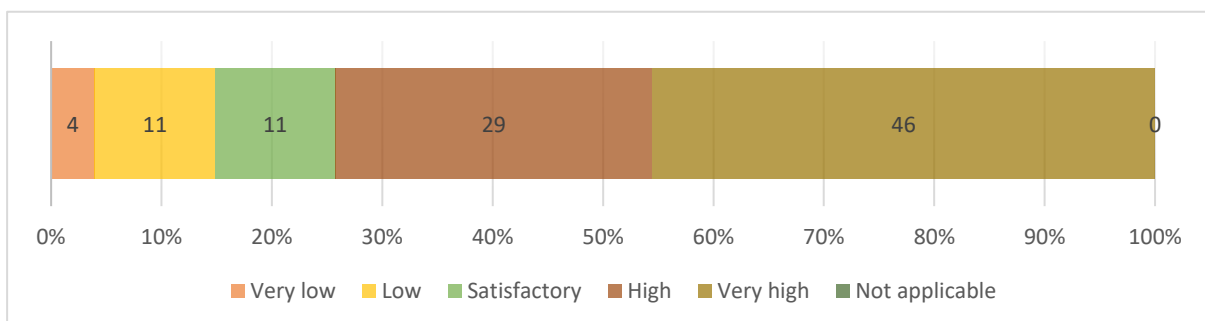
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	2	6	9	11	0	4,0
RESULTS [%]	0	7	21	32	39	0	

32. Is ready to assess the risks and consequences of undertaking mining activities..



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	2	2	4	8	10	2	3,9
RESULTS [%]	7	7	14	29	36	7	

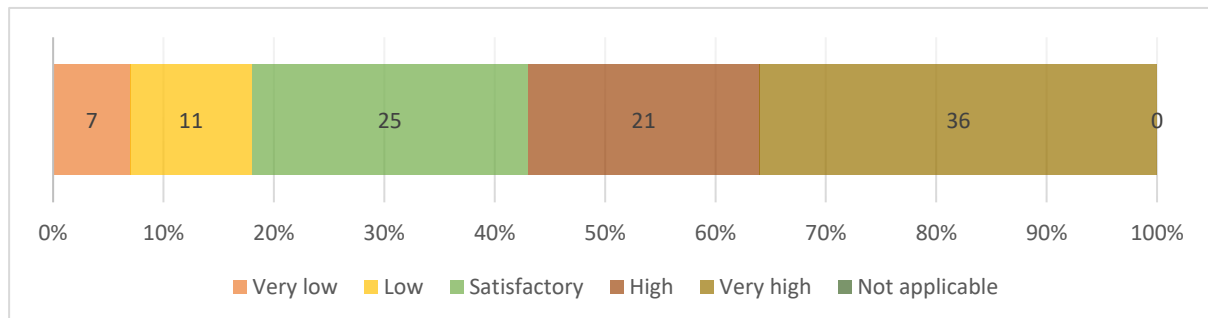
33. Is aware of the importance of the extractive industry for socio-economic development.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
--------	----------	-----	--------------	------	-----------	----------------	---------

	1	2	3	4	5	0	4,0
RESULTS [No]	1	3	3	8	13	0	
RESULTS [%]	4	11	11	29	46	0	

34. Is ready to initiate actions for sustainable development.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	2	3	7	6	10	0	3,7
RESULTS [%]	7	11	25	21	36	0	

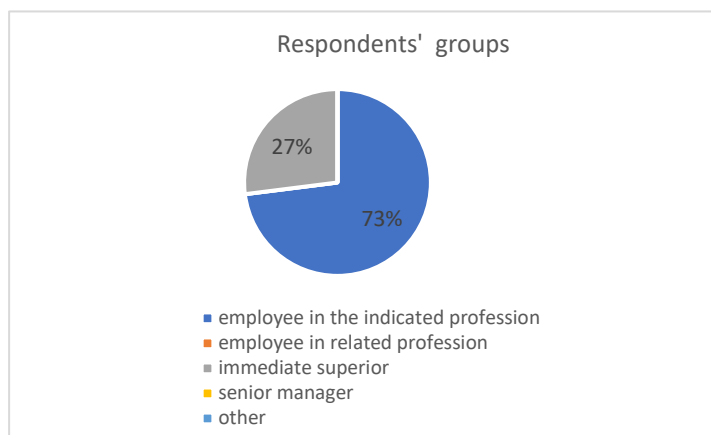
38. Please provide feedback, comments and suggestions to the social competences above:

– *no one.*

ONLINE SURVEY RESULTS FOR THE COMPETENCE PROFILEMINING GEOLOGIST

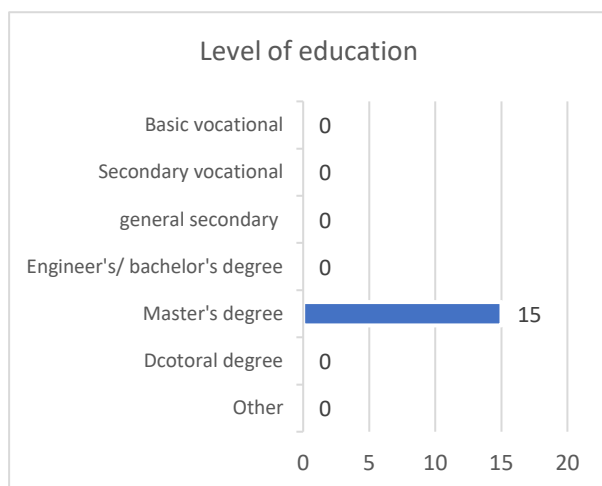
GENERAL RESULTS

15 respondents took part in the survey, divided into following groups:



	Numbers	%
employee in the indicated profession	11	73
employee in a related profession	0	0
immediate superior	4	27
senior manager	0	0
other	0	0
	15	100

The cross-section of respondents in terms of education is as follows:



	Numbers	%
Basic vocational	0	0
Secondary vocational	0	0
General secondary	0	0
Engineer's/ bachelor's	0	0
Master's degree	15	100
Doctoral degree	0	0
other	0	0
	15	100

Assessment of professional skills and social competence

The respondent, who is an employee of the surveyed profession, was asked to assign the level of individual professional and social skills characterizing this profession, observed in the respondent's opinion in himself and in his co-workers.

The respondent, who is the supervisor of employees performing the surveyed profession, was asked to express a similar (average) opinion in relation to the employees he manages.

In the survey, respondents rated on a 5-point Likert scale:

1. Very low
2. Low
3. Satisfactory
4. High
5. Very high

0. Not applicable

If the respondent could not take a position on a given issue, it was possible to select the "Not applicable" option. The "N/A" option has a weight of "0" and was not counted towards the average of the results.

The results for the competence profile of Mining Geologist expressed as the average of the grade were ranked below in ascending order.

Table. Mining Geologist – results of the competency gap survey in the area of social skills and competences (n=15).

ASSESSMENT OF PROFESSIONAL SKILLS	Average score (n=15)
Draws up applications for the establishment of a mining area and site or its liquidation, and develops projects for the reclamation of areas after mine liquidation	2,7
Applies modern statistical and geostatistical methods to the assessment of deposits and uses modern computer software in documentation work	3,2
Prepares and communicates warnings to public authorities of dangerous phenomena occurring in groundwater recharge and abstraction zones	3,5
Conducts structural, mineralogical and petrographic studies to determine geological phenomena and anticipatory and reconnaissance studies	3,6
Applies the principles of economics of mining enterprises	3,7
Applies the principles of mining company logistics	3,7
Develops projects for the dewatering of mineral deposits and the injection of water into rock masses	3,7
Develops hydrogeological maps of groundwater resources	3,7
Assesses the environmental impact of planned copper ore mining	3,7
Organises and co-ordinates all issues related to the geological and hydrogeological service of the mining site	3,9
Identifies geometrical, hydrogeological, geological-engineering, gas and temperature conditions for copper ore mining	3,9
Analyses, uses and updates the content of geological maps and photogrammetric materials to synthesise geological findings	3,9
Conducts periodic analyses of ore management and documents the causes of losses in copper ore reserves	3,9
Carries out hydrogeological measurements, observations and tests to determine infiltration,	4,0

porosity, water absorption and water permeability of rocks	
It conducts exploration and appraisal of copper ores and estimates their size and reserves.	4,0
Applies health, safety and fire regulations and rules applicable to hydrological and exploration geological work	4,1
Performs ongoing analysis and assessment of the hydrogeological situation at mining operations	4,1
Supervises mining and drilling works, taking into account the rational use of minerals, the compliance of works with the concession and the deposit development project, the mining plant operation plan, the selective exploitation and the heaping of multi-commodity deposits	4,1
Prepares documentation of geological and mining work and a record of changes in copper ore reserves	4,1
Applies environmental regulations and rules applicable to hydrological and exploration geological work	4,2
Applies the principles of mining enterprises	4,2
Develops the design of mapping, profiling and testing of mining and drilling operations	4,2
Conducts the study and quality control of the ore body and investigates the variability of quality parameters in the copper ore mining process	4,2
Applies the intellectual property protection laws of mining companies	4,3
Plans the work at the mining site in accordance with the provisions of the Geological and Mining Law	4,3
Inspects and supervises the operating documents with regard to their compliance with geological and mining legislation	4,3
Performs survey work in determining the presence and extent of underground water resources in areas affected by mining activities	4,3
Samples deposits in mine workings for chemical, mineral-petrographic, technological, stratigraphic, etc. studies	4,3
Controls the implementation of the mining works geologically with the applicable Mining Plan	4,4
It controls the quality and variability of water quality parameters in the copper ore mining process	4,4
Resolves groundwater inflow problems in mining operations	4,5
Conducts periodic and planned inspections of underground works at the mine site	4,6
Informs the Mine Site Manager of any discrepancies found during the execution of mining works	4,6
ASSESSMENT OF SOCIAL COMPETENCE	
Demonstrates social and entrepreneurial activity in the workplace	3,4
Is ready to assess the risks and consequences of undertaking mining activities	3,4
Motivates colleagues and subordinates to effectively achieve objectives, comply with regulations, implement good practices and professional ethics	3,5
Builds and maintains good relationships with different stakeholder groups (local communities, subordinates, customers and subcontractors) by strengthening mutual trust, respect and improving communication	3,5
Is ready to initiate actions for sustainable development	3,6
Demonstrates a willingness to solve problems in the workplace in a flexible manner	3,7
Is willing to take responsibility for the tasks assigned and decisions made	3,8
Adheres to the principles of professional ethics	3,9
Is ready to make decisions within the scope of the tasks assigned	3,9
Is willing to share knowledge	4,1
Is aware of the importance of the extractive industry for socio-economic development	4,1

Findings

Based on the results of the competence gap survey among selected groups of employees in the copper sector (competence profile: Mining Geologist), the following are the professional skills and social competence whose level in the opinion of the respondents is currently the lowest (a unified threshold of the average value of the assessment of 4.0 was adopted).

It is justified to include employees in targeted educational activities developing the following skills:

PROFESSIONAL SKILLS

- Draws up applications for the establishment of a mining area and site or its liquidation, and develops projects for the reclamation of areas after mine liquidation.
- Applies modern statistical and geostatistical methods to the assessment of deposits and uses modern computer software in documentation work.
- Prepares and communicates warnings to public authorities of dangerous phenomena occurring in groundwater recharge and abstraction zones.
- Conducts structural, mineralogical and petrographic studies to determine geological phenomena and anticipatory and reconnaissance studies.
- Applies the principles of economics of mining enterprises.
- Applies the principles of mining company logistics.
- Develops projects for the dewatering of mineral deposits and the injection of water into rock masses.
- Develops hydrogeological maps of groundwater resources.
- Assesses the environmental impact of planned copper ore mining.
- Organises and co-ordinates all issues related to the geological and hydrogeological service of the mining site.
- Identifies geometrical, hydrogeological, geological-engineering, gas and temperature conditions for copper ore mining
- Analyses, uses and updates the content of geological maps and photogrammetric materials to synthesise geological findings.
- Conducts periodic analyses of ore management and documents the causes of losses in copper ore reserves.

SOCIAL COMPETENCE

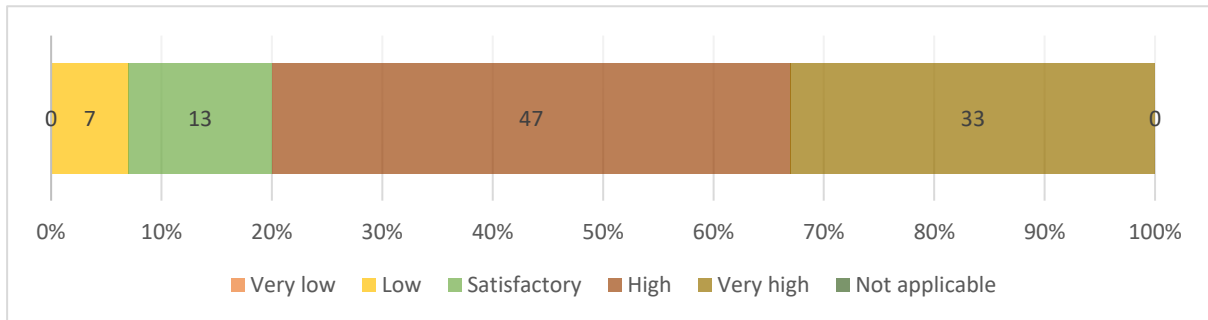
- Demonstrates social and entrepreneurial activity in the workplace.
- Is ready to assess the risks and consequences of undertaking mining activities.
- Motivates colleagues and subordinates to effectively achieve objectives, comply with regulations, implement good practices and professional ethics.
- Builds and maintains good relationships with different stakeholder groups (local communities, subordinates, customers and subcontractors) by strengthening mutual trust, respect and improving communication.
- Is ready to initiate actions for sustainable development.
- Demonstrates a willingness to solve problems in the workplace in a flexible manner.
- Is willing to take responsibility for the tasks assigned and decisions made.
- Adheres to the principles of professional ethics.
- Is ready to make decisions within the scope of the tasks assigned.

See detailed results in the next section.

DETAILED RESULTS

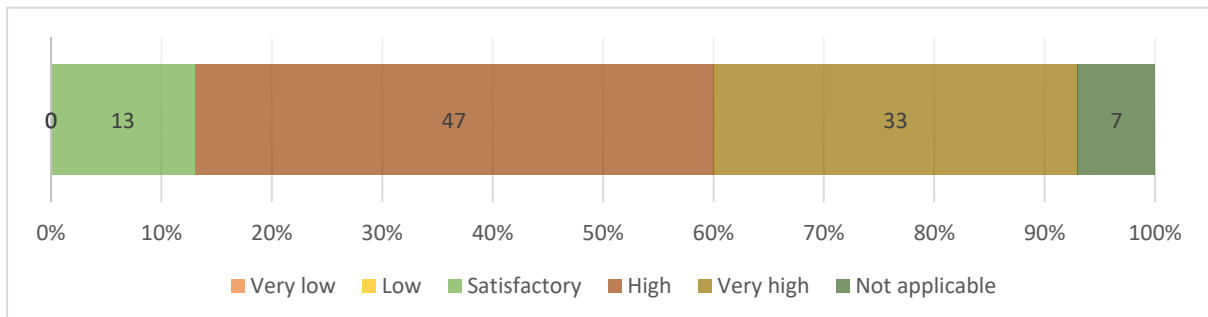
Assessment of professional skills

1. Applies health, safety and fire regulations and rules applicable to hydrological and exploration geological work.



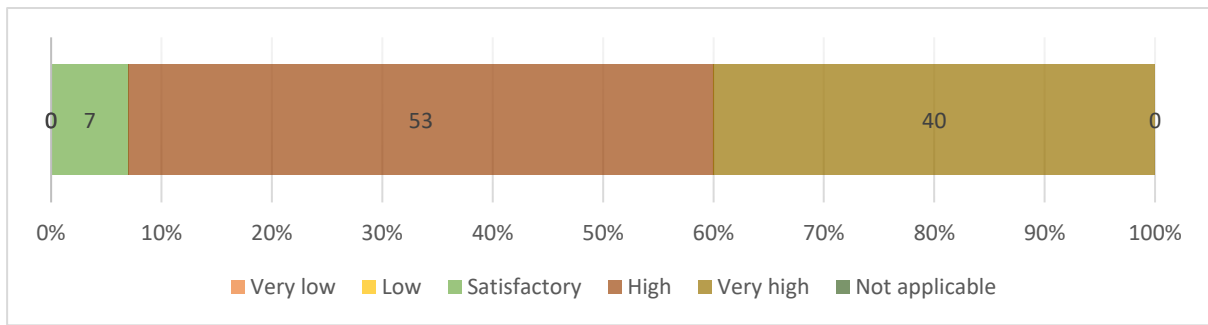
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	1	2	7	5	0	4,1
RESULTS [%]	0	7	13	47	33	0	

2. Applies environmental regulations and rules applicable to hydrological and exploration geological work.



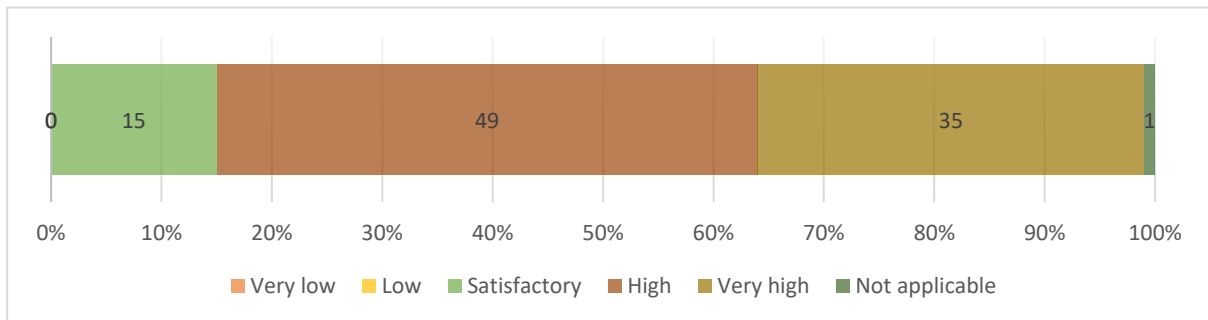
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	0	2	7	5	1	4,2
RESULTS [%]	0	0	13	47	33	7	

3. Applies the intellectual property protection laws of mining companies.



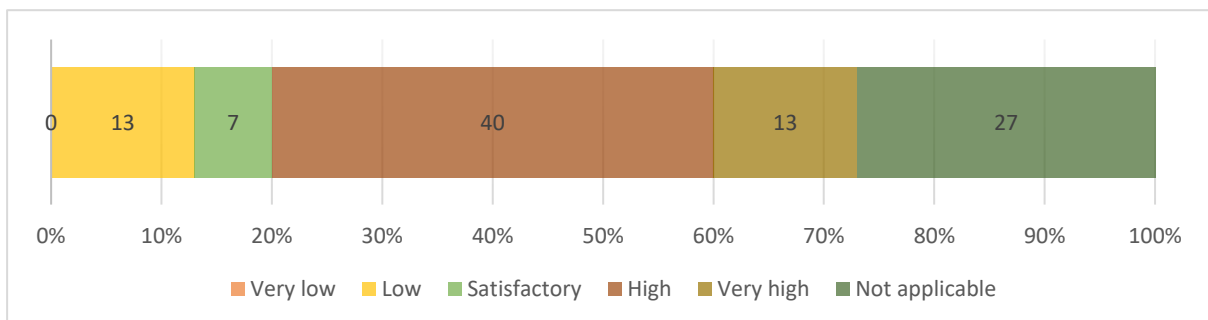
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	0	1	8	6	0	4,3
RESULTS [%]	0	0	7	53	40	0	

4. Applies the principles of economics of mining enterprises.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	1	3	6	2	3	3,7
RESULTS [%]	0	7	20	40	13	20	

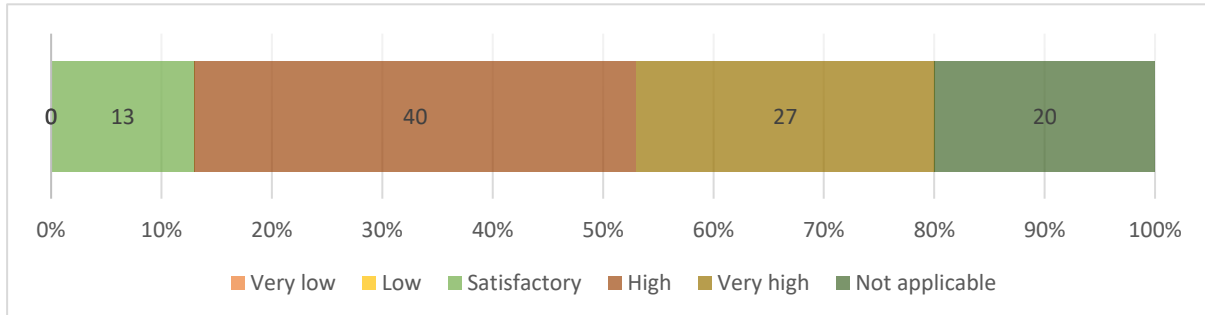
5. Applies the principles of mining company logistics.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	13	7	40	13	27	
RESULTS [%]	0	13	7	40	13	27	

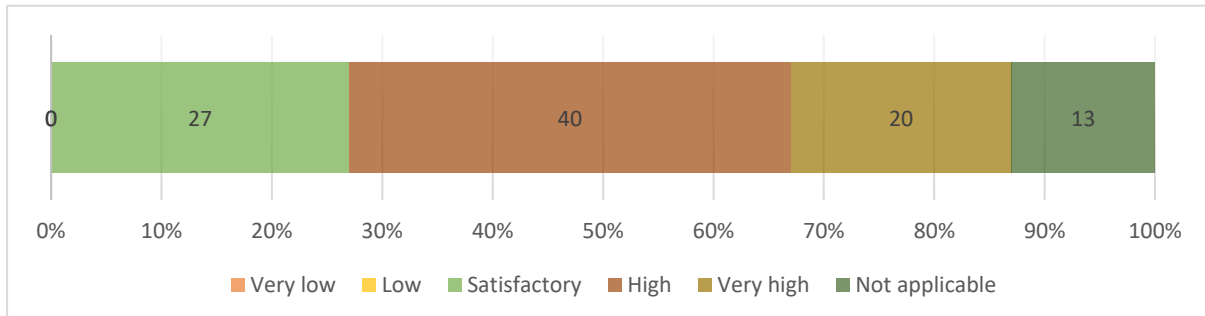
RESULTS [No]	0	2	1	6	2	4	3,7
RESULTS [%]	0	13	7	40	13	27	

6. Applies the principles of mining enterprises.



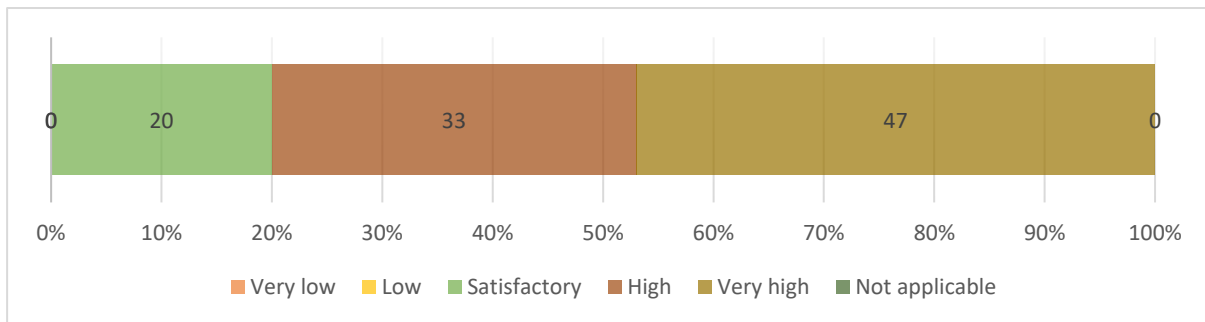
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	0	2	6	4	3	4,2
RESULTS [%]	0	0	13	40	27	20	

7. Organises and co-ordinates all issues related to the geological and hydrogeological service of the mining site.



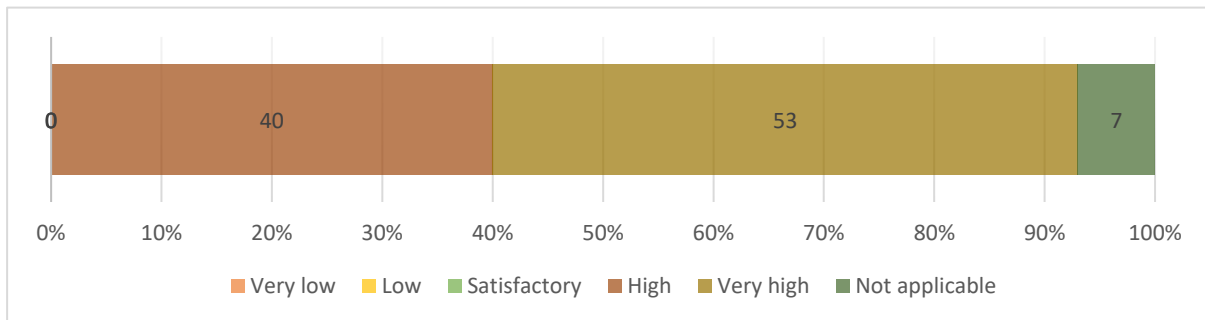
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	0	4	6	3	2	3,9
RESULTS [%]	0	0	27	40	20	13	

8. Plans the work at the mining site in accordance with the provisions of the Geological and Mining Law.



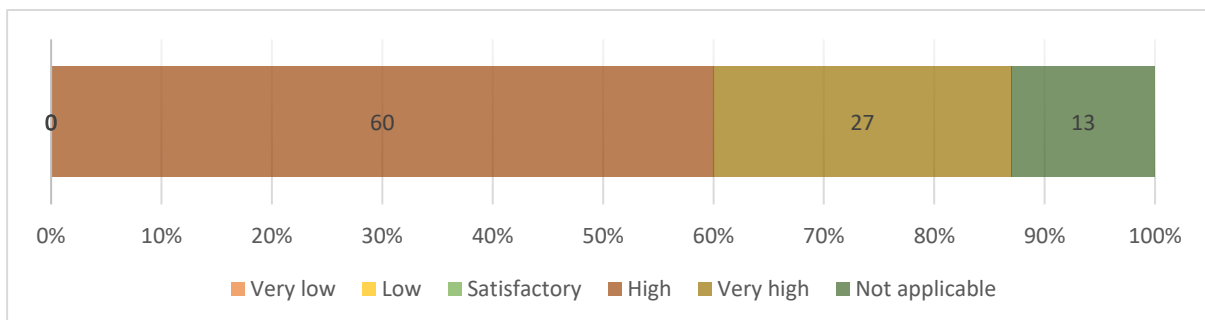
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	0	3	5	7	0	4,3
RESULTS [%]	0	0	20	33	47	0	

9. Conducts periodic and planned inspections of underground works at the mine site.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	0	0	6	8	1	4,6
RESULTS [%]	0	0	0	40	53	7	

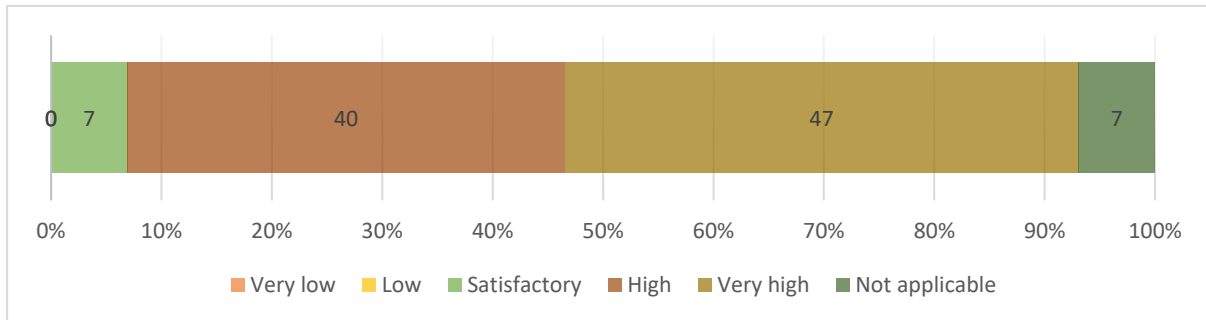
10. Inspects and supervises the operating documents with regard to their compliance with geological and mining legislation.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
--------	----------	-----	--------------	------	-----------	----------------	---------

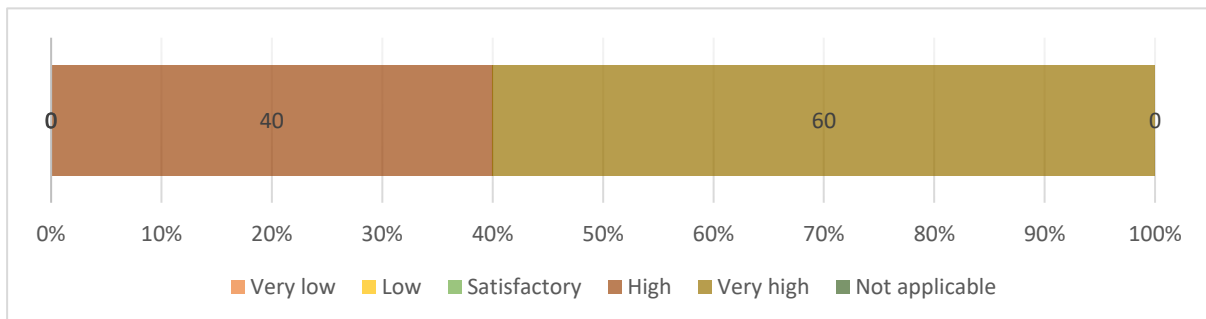
	1	2	3	4	5	0	4,3
RESULTS [No]	0	0	0	9	4	2	
RESULTS [%]	0	0	0	60	27	13	

11. Controls the implementation of the mining works geologically with the applicable Mining Plan.



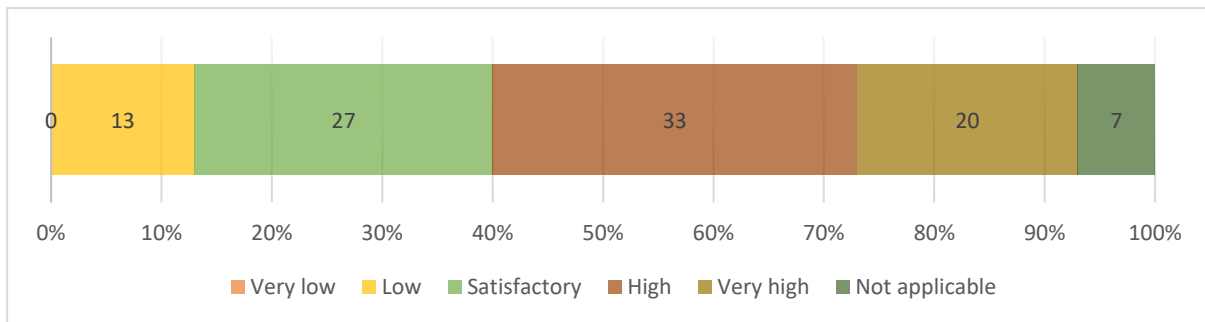
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	0	1	6	7	1	4,4
RESULTS [%]	0	0	7	40	47	7	

12. Informs the Mine Site Manager of any discrepancies found during the execution of mining works.



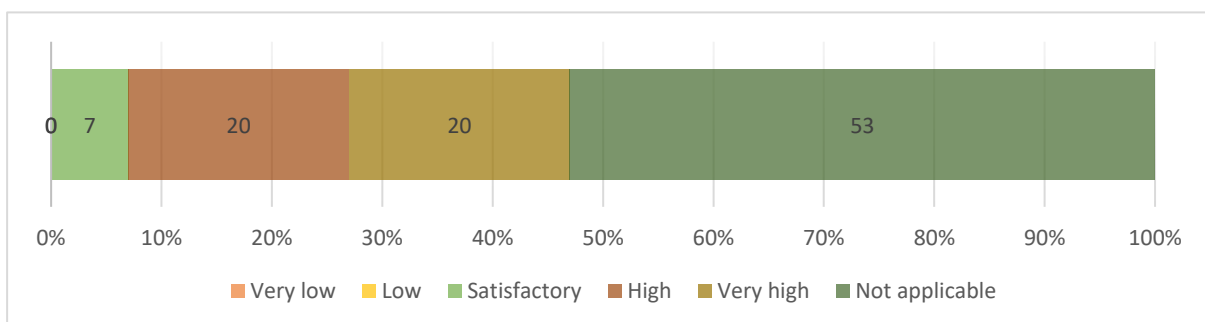
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	0	0	6	9	0	4,6
RESULTS [%]	0	0	0	40	60	0	

13. Conducts structural, mineralogical and petrographic studies to determine geological phenomena and anticipatory and reconnaissance studies.



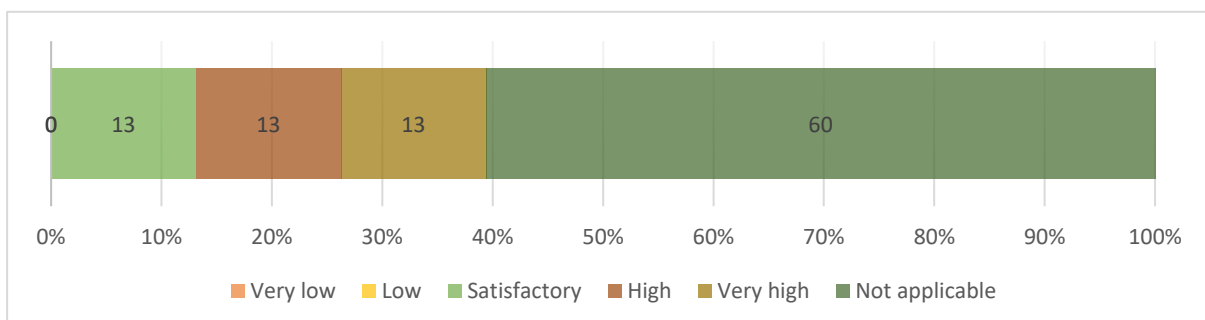
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
1	0	2	3	4	5	0	
RESULTS [No]	0	2	4	5	3	1	3,6
RESULTS [%]	0	13	27	33	20	7	

14. Performs survey work in determining the presence and extent of underground water resources in areas affected by mining activities.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
1	0	0	1	3	3	0	
RESULTS [No]	0	0	1	3	3	8	4,3
RESULTS [%]	0	0	7	20	20	53	

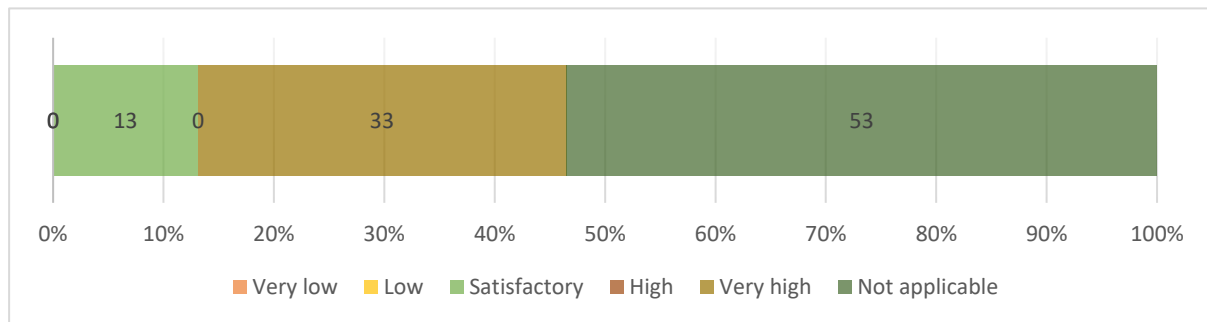
15. Carries out hydrogeological measurements, observations and tests to determine infiltration, porosity, water absorption and water permeability of rocks.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not	Average
1	0	13	13	13	60	0	

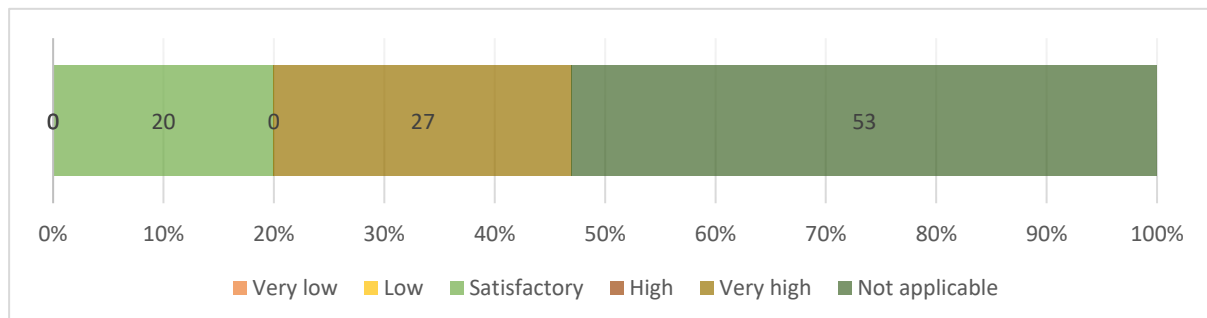
						applicable	
	1	2	3	4	5	0	
RESULTS [No]	0	0	2	2	2	9	4,0
RESULTS [%]	0	0	13	13	13	60	

16. Controls the quality and variability of water quality parameters in the copper ore mining process.



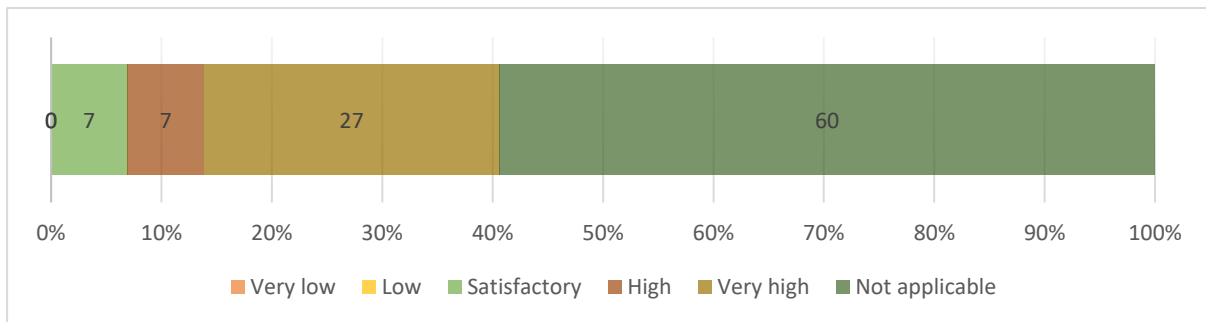
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	0	2	0	5	8	4,4
RESULTS [%]	0	0	13	0	33	53	

17. Performs ongoing analysis and assessment of the hydrogeological situation at mining operations.



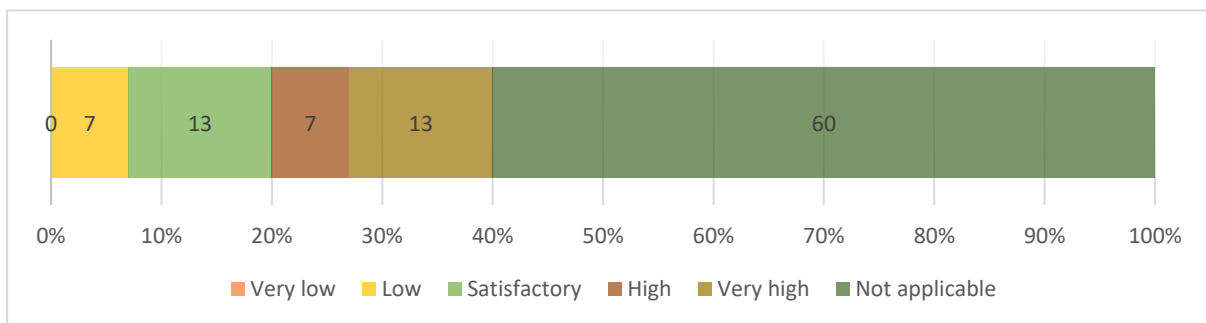
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	0	3	0	4	8	4,1
RESULTS [%]	0	0	20	0	27	53	

18. Resolves groundwater inflow problems in mining operations.



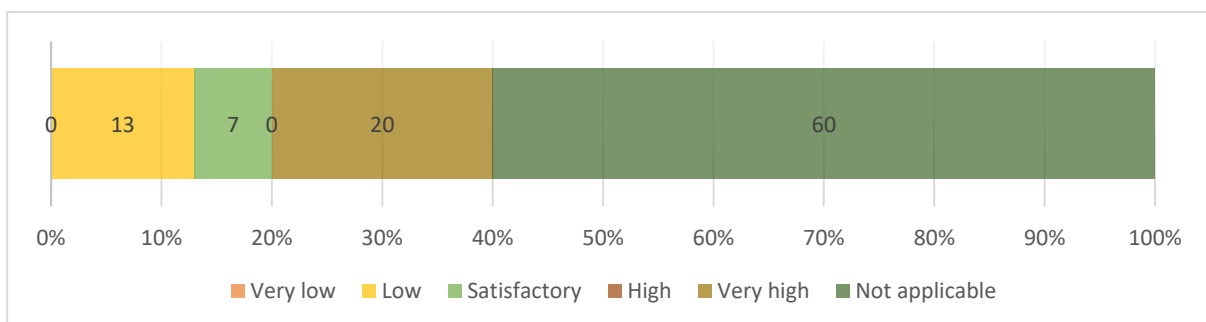
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	0	1	1	4	9	4,5
RESULTS [%]	0	0	7	7	27	60	

19. Develops projects for the dewatering of mineral deposits and the injection of water into rock masses.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	1	2	1	2	9	3,7
RESULTS [%]	0	7	13	7	13	60	

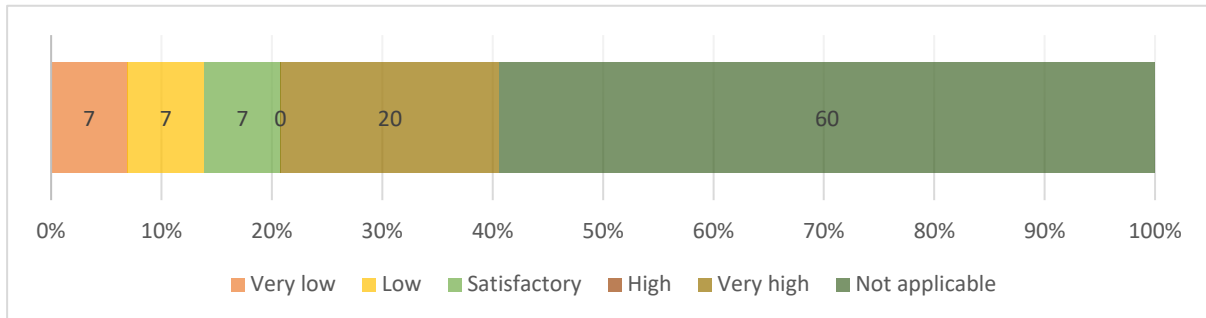
20. Develops hydrogeological maps of groundwater resources.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average

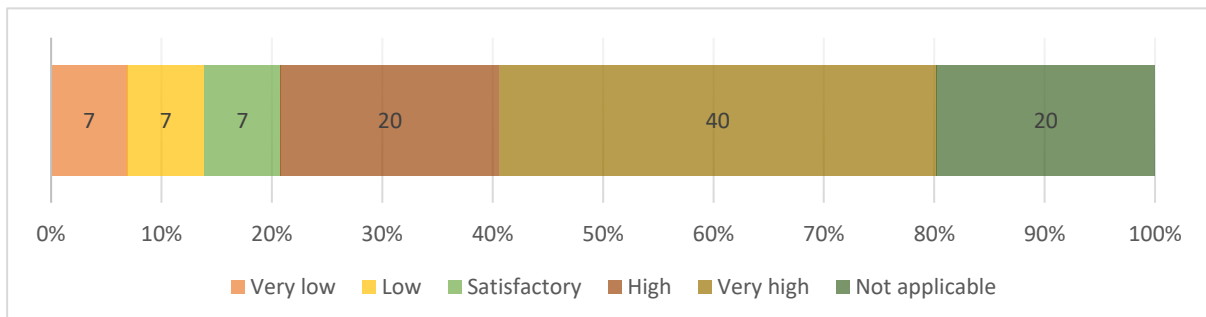
	1	2	3	4	5	0	3,7
RESULTS [No]	0	2	1	0	3	9	
RESULTS [%]	0	13	7	0	20	60	

21. Prepares and communicates warnings to public authorities of dangerous phenomena occurring in groundwater recharge and abstraction zones.



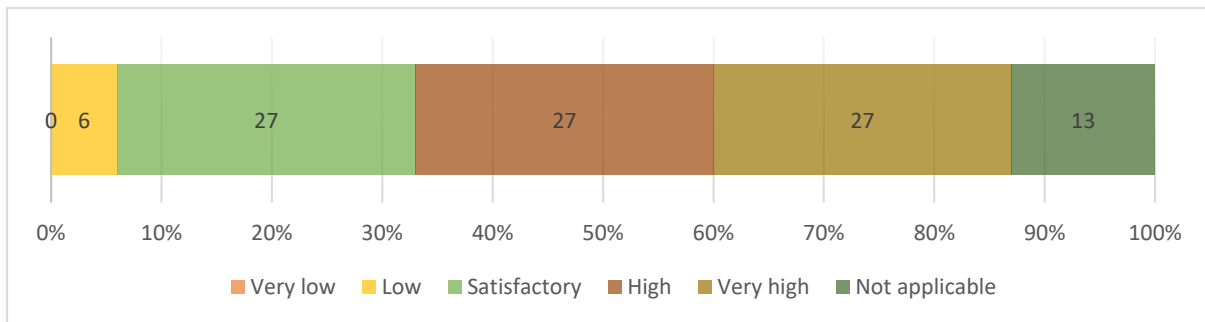
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	1	1	1	0	3	9	3,5
RESULTS [%]	7	7	7	0	20	60	

22. Conducts exploration and appraisal of copper ores and estimates their size and reserves.



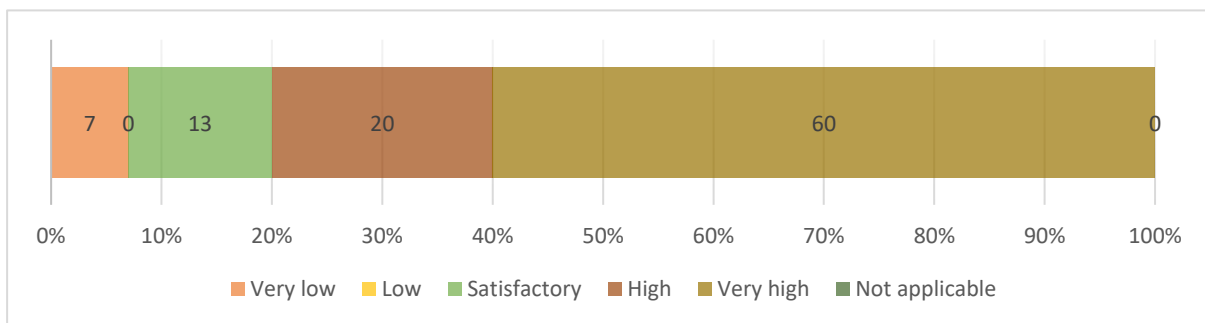
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	1	1	1	3	6	3	4,0
RESULTS [%]	7	7	7	20	40	20	

23. Identifies geometrical, hydrogeological, geological-engineering, gas and temperature conditions for copper ore mining.



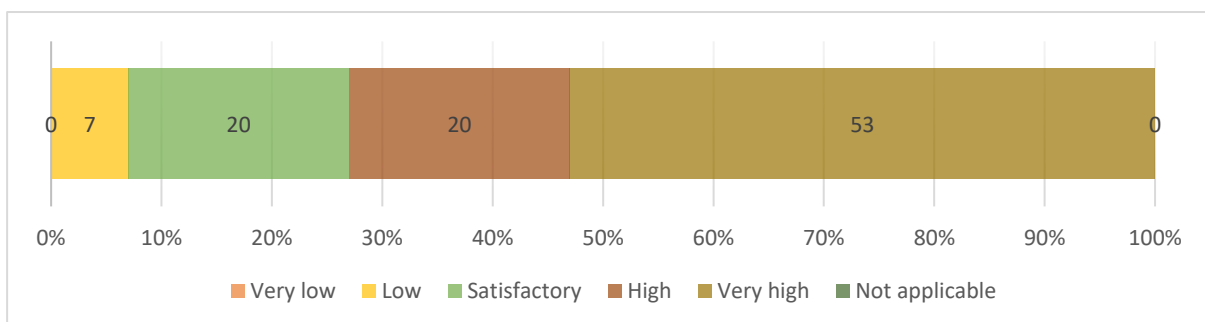
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	1	4	4	4	2	3,9
RESULTS [%]	0	6	27	27	27	13	

24. Samples deposits in mine workings for chemical, mineral-petrographic, technological, stratigraphic, etc. studies.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	1	0	2	3	9	0	4,3
RESULTS [%]	7	0	13	20	60	0	

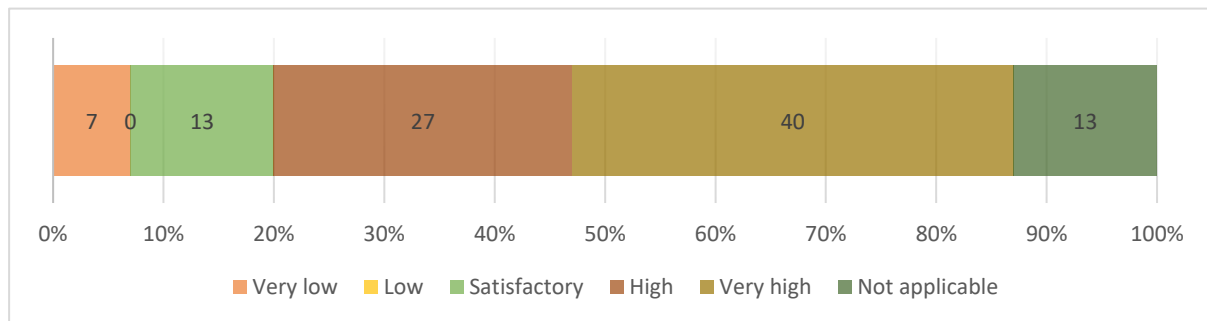
25. Develops the design of mapping, profiling and testing of mining and drilling operations.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average

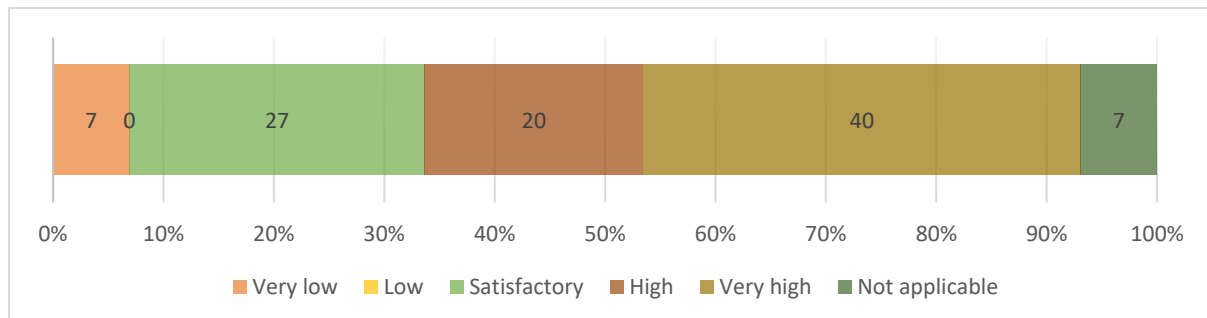
	1	2	3	4	5	0	4,2
RESULTS [No]	0	1	3	3	8	0	
RESULTS [%]	0	7	20	20	53	0	

26. Supervises mining and drilling works, taking into account the rational use of minerals, the compliance of works with the concession and the deposit development project, the mining plant operation plan, the selective exploitation and the heaping of multi-commodity deposits.



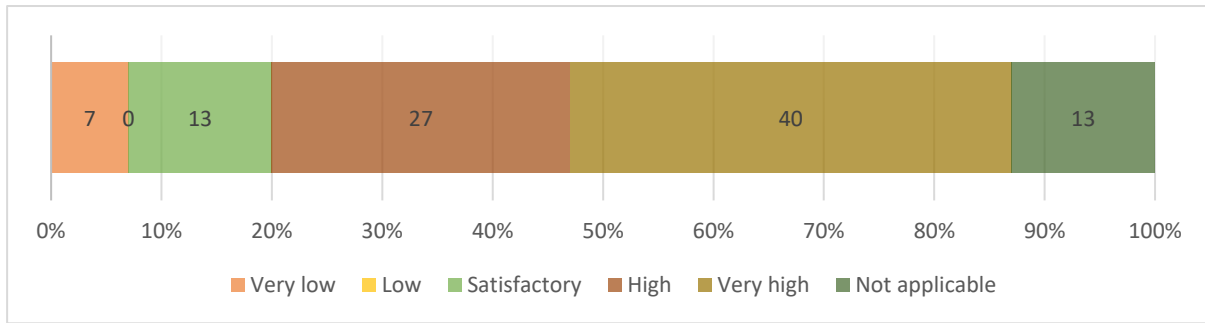
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	1	0	2	4	6	2	4,1
RESULTS [%]	7	0	13	27	40	13	

27. Analyses, uses and updates the content of geological maps and photogrammetric materials to synthesise geological findings.



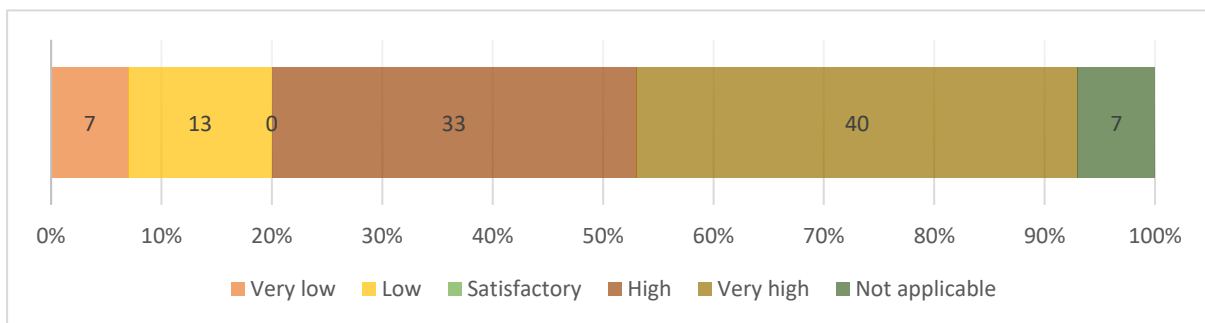
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	1	0	4	3	6	1	3,9
RESULTS [%]	7	0	27	20	40	7	

28. Prepares documentation of geological and mining work and a record of changes in copper ore reserves.



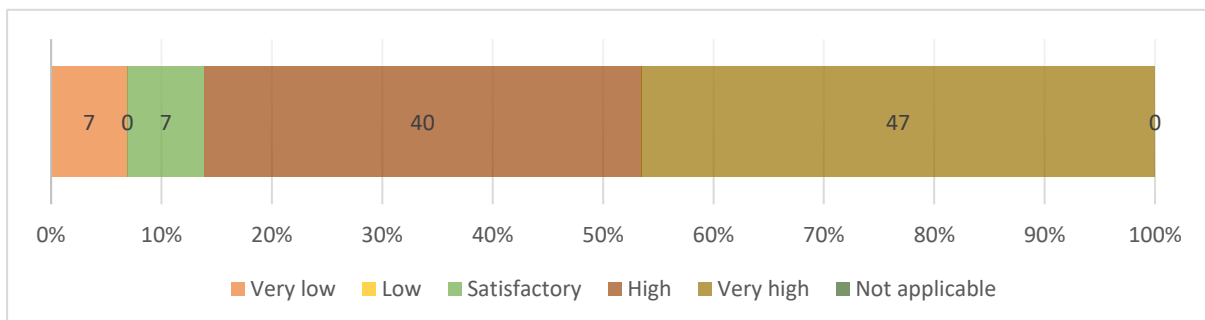
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	1	0	2	4	6	2	4,1
RESULTS [%]	7	0	13	27	40	13	

29. Conducts periodic analyses of ore management and documents the causes of losses in copper ore reserves.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	1	2	0	5	6	1	3,9
RESULTS [%]	7	13	0	33	40	7	

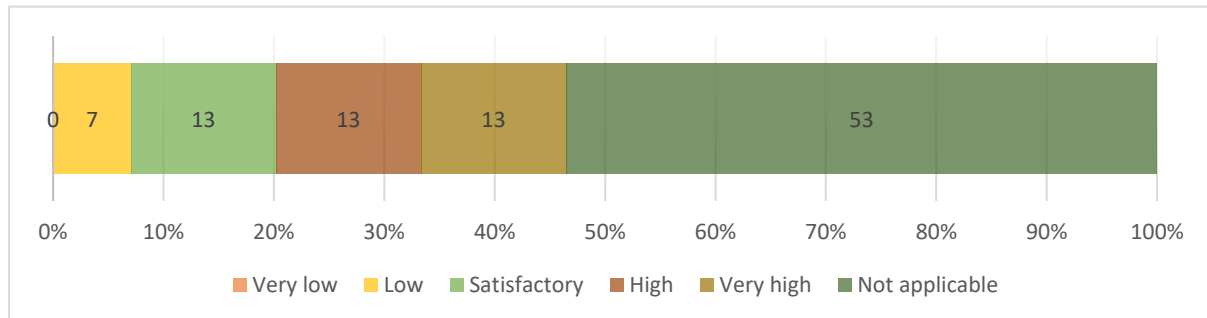
30. Conducts the study and quality control of the ore body and investigates the variability of quality parameters in the copper ore mining process.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not	Average
--------	----------	-----	--------------	------	-----------	-----	---------

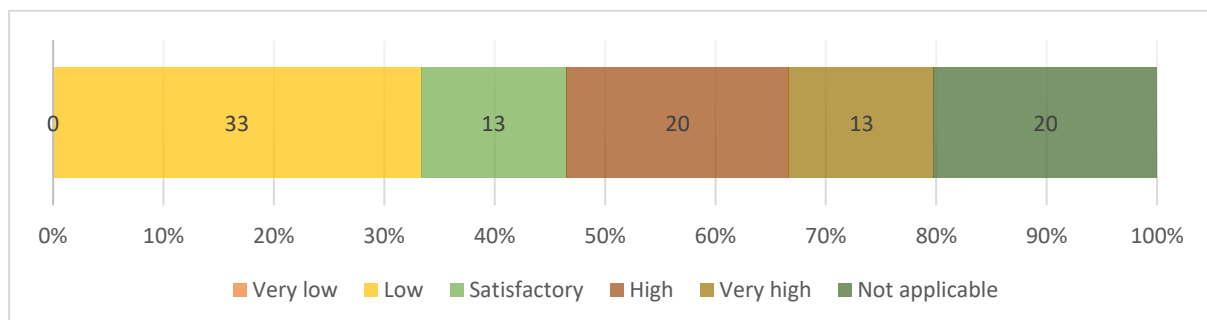
						applicable	
	1	2	3	4	5	0	
RESULTS [No]	1	0	1	6	7	0	4,2
RESULTS [%]	7	0	7	40	47	0	

31. Assesses the environmental impact of planned copper ore mining.



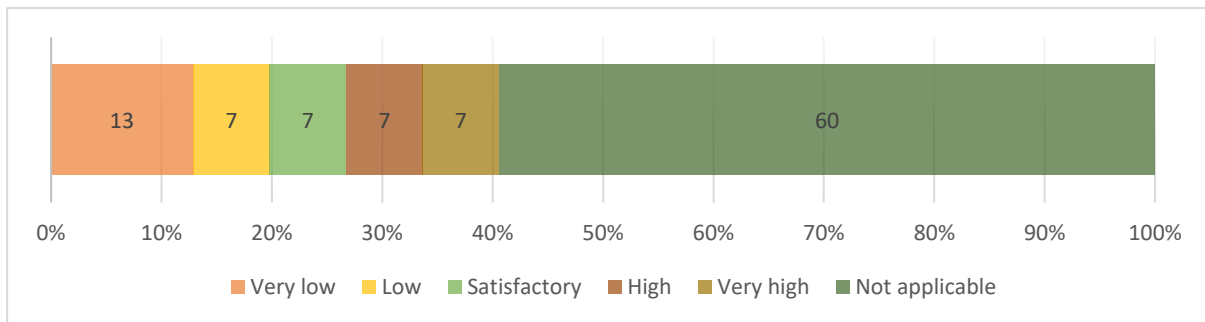
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	1	2	2	2	8	3,7
RESULTS [%]	0	7	13	13	13	53	

32. Applies statistical and geostatistical methods to the assessment of deposits and uses modern computer software in documentation work.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	5	2	3	2	3	3,2
RESULTS [%]	0	33	13	20	13	20	

33. Draws up applications for the establishment of a mining area and site or its liquidation, and develops projects for the reclamation of areas after mine liquidation.



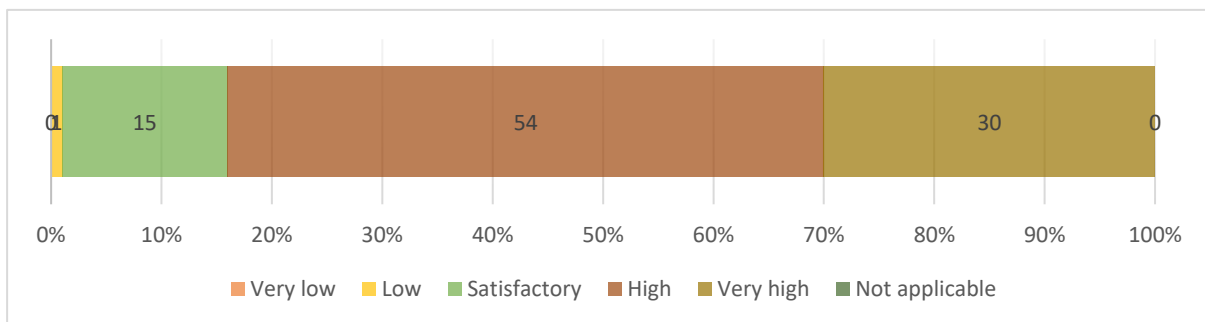
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	2	1	1	1	1	9	2,7
RESULTS [%]	13	7	7	7	7	60	

34. Please provide feedback, comments and suggestions to the professional skills above:

– no one.

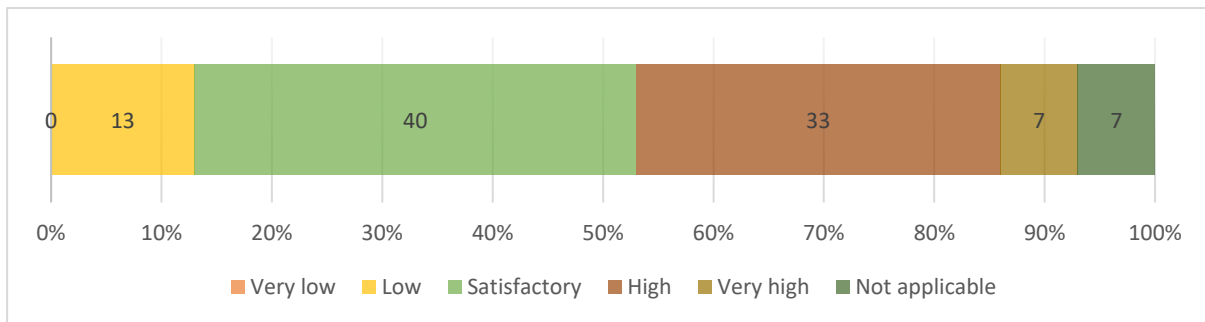
Assessment of social competence

24. Adheres to the principles of professional ethics.



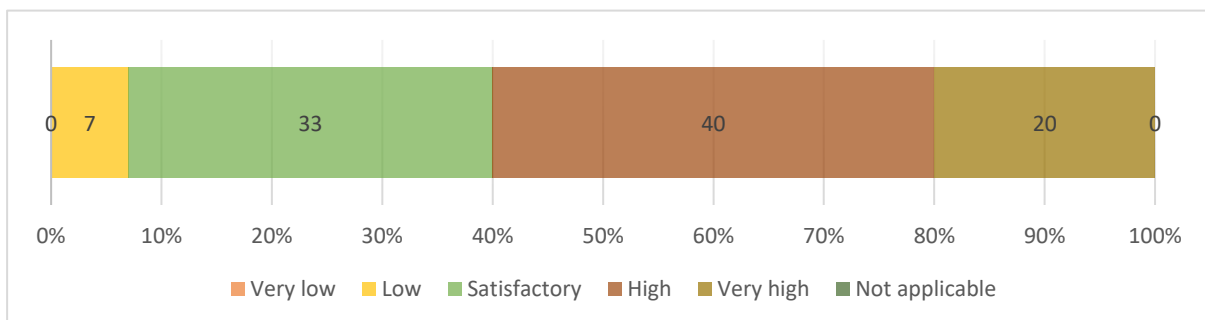
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	1	3	8	3	0	3,9
RESULTS [%]	0	7	20	53	20	0	

25. Demonstrates social and entrepreneurial activity in the workplace.



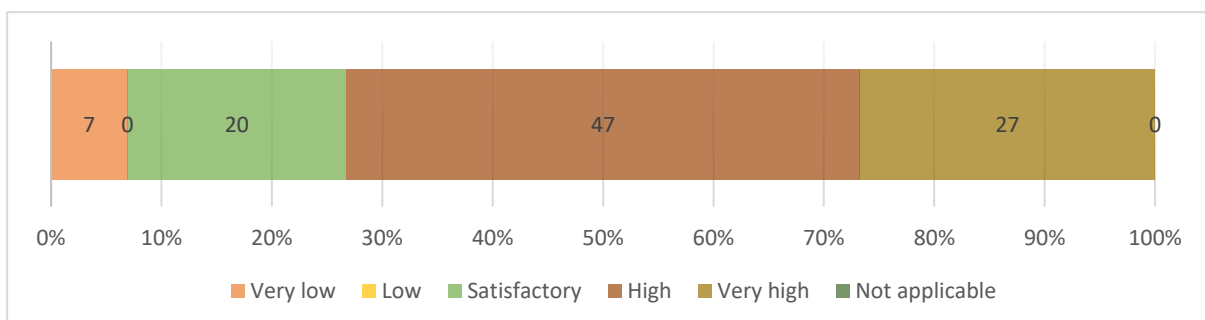
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	2	6	5	1	1	3,4
RESULTS [%]	0	13	40	33	7	7	

26. Demonstrates a willingness to solve problems in the workplace in a flexible manner.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	1	5	6	3	0	3,7
RESULTS [%]	0	7	33	40	20	0	

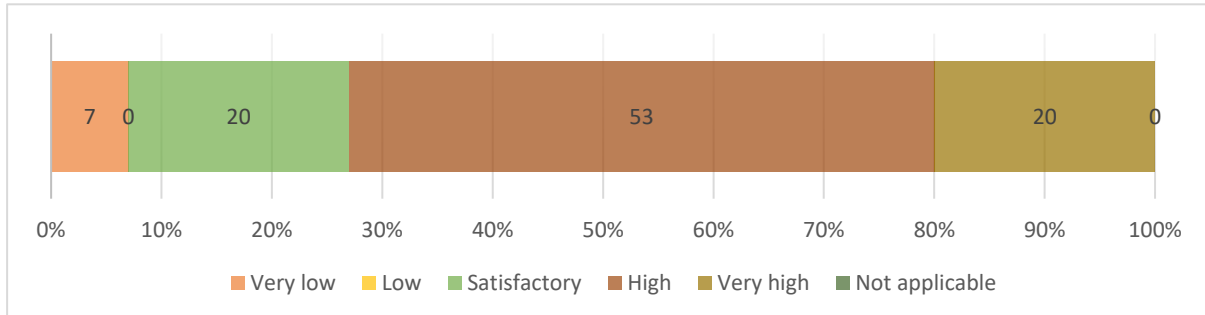
27. Is ready to make decisions within the scope of the tasks assigned.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	

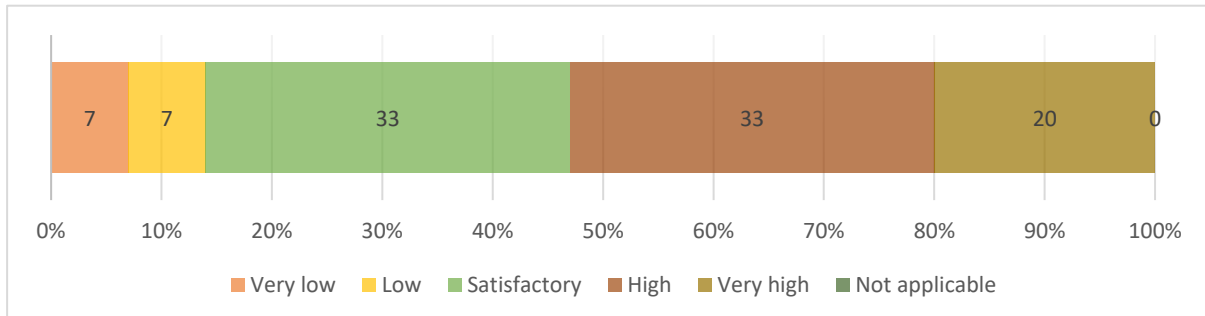
RESULTS [No]	1	0	3	7	4	0	3,9
RESULTS [%]	7	0	20	47	27	0	

28. Is willing to take responsibility for the tasks assigned and decisions made.



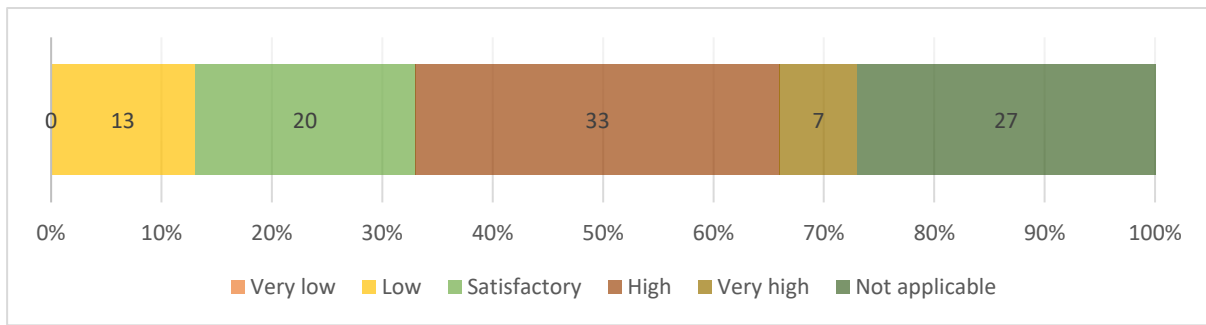
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	1	0	3	8	3	0	3,8
RESULTS [%]	7	0	20	53	20	0	

29. Motivates colleagues and subordinates to effectively achieve objectives, comply with regulations, implement good practices and professional ethics.



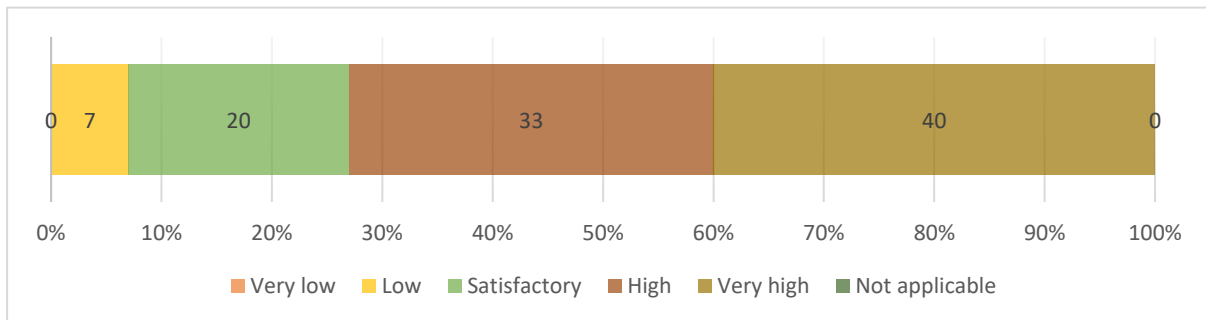
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	1	1	5	5	3	0	3,5
RESULTS [%]	7	7	33	33	20	0	

30. Builds and maintains good relationships with different stakeholder groups (local communities, subordinates, customers and subcontractors) by strengthening mutual trust, respect and improving communication.



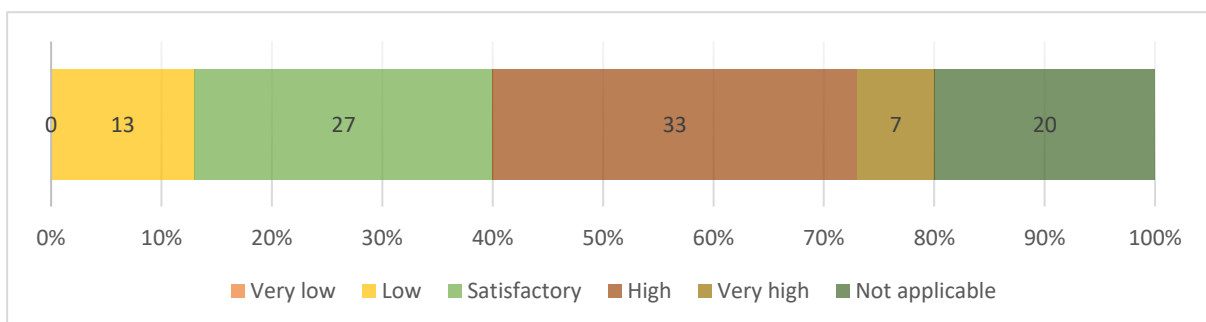
SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	2	3	5	1	4	3,5
RESULTS [%]	0	13	20	33	7	27	

31. Is willing to share knowledge.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	1	3	5	6	0	4,1
RESULTS [%]	0	7	20	33	40	0	

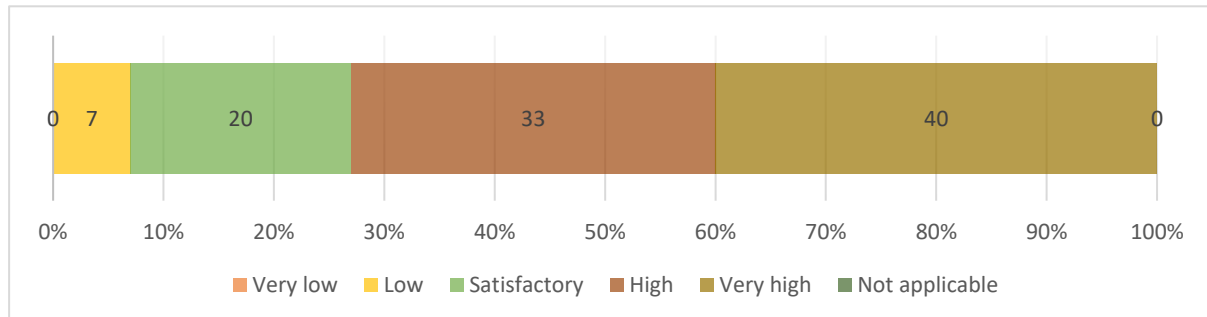
32. Is ready to assess the risks and consequences of undertaking mining activities.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	13	27	33	7	20	3,5
RESULTS [%]	0	13	27	33	7	20	

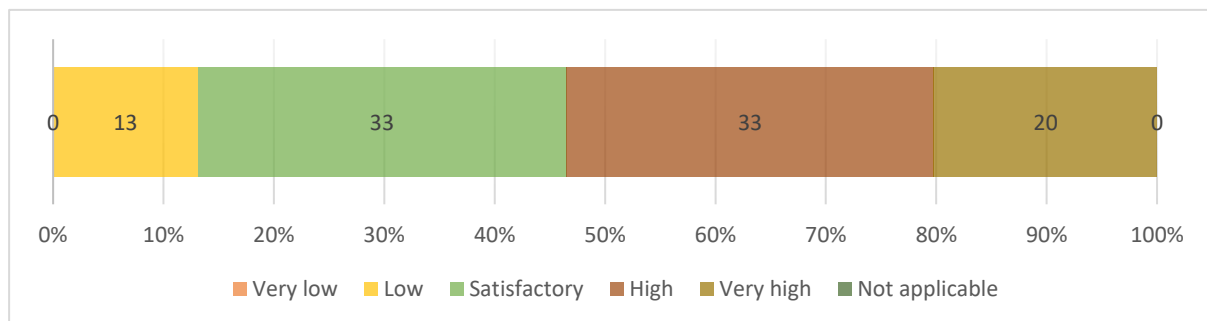
RESULTS [No]	0	2	4	5	1	3	3,4
RESULTS [%]	0	13	27	33	7	20	

33. Is aware of the importance of the extractive industry for socio-economic development.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	1	3	5	6	0	4,1
RESULTS [%]	0	7	20	33	40	0	

34. Is ready to initiate actions for sustainable development.



SCALE:	Very low	Low	Satisfactory	High	Very high	Not applicable	Average
	1	2	3	4	5	0	
RESULTS [No]	0	2	5	5	3	0	3,6
RESULTS [%]	0	13	33	33	20	0	

38. Please provide feedback, comments and suggestions to the social competences above:

– no one.