

**REGULATIONS**  
**ON THE WORK OF THE EXPERT JURY**  
**AT THE WORLD CONSTRUCTION CHAMPIONSHIP (WCC)**

**2021**

**CONTENTS**

1. Purpose and scope
2. Terms and definitions

3. Qualification criteria for the Expert Jury by nomination
4. Expert Jury designation by nomination
5. Grounds and procedure for replacing Jury Experts
6. Powers and responsibilities for the Expert Jury
7. Description of the special cases and assumptions involved
8. Expert Jury working tools
9. Training of Jury Experts by nomination
10. Expert Jury Standard Operating Procedures
11. Procedures for On-site Interaction

**Annex No.1** Qualification and professional requirements for Expert Jury Members by nomination

**Annex No.2** Report form sheet to select the Jury Chairman

## 1. PURPOSE AND SCOPE

1.1 These Regulations define the operating procedures for the Expert Jury (hereinafter referred to as the “Jury”), broken down by nomination, at the World Construction Championship (WCC) (hereinafter referred to as the “Championship”).

These Regulations have been developed:

- to approve the qualification criteria for the Expert Jury
- to approve the general operating procedures for the Jury
- to establish the powers and responsibilities for Jury Members.

1.2 These Regulations were developed as a supplement to The Methods and General Order of the Championship.

## 2. TERMS AND DEFINITIONS

| <b>Abbreviation</b>                | <b>Spelled out in form</b>   |
|------------------------------------|--|
| Championship                       | The World Construction Championship (WCC) shall mean the international championship in industrial facility construction  |
| Nomination                         | Name of the activity (profession) and/or competence for which the Championship competitions are held   |
| Task                               | The task whose performance and results demonstrates the level of knowledge and skills held by Participants in the Championship, and the degree to which they have mastered the skills involved in the nomination       |
| Jury/Expert Jury                   | A group of experts evaluating the results of the tasks performed by the Participants across categories   |
| Organizing committee               | Federal Organizing Committee of the Championship   |
| Participant Organization           | An Organization whose specialists take part in Championship competitions/General partner-Participant   |
| Organization-developer             | An Organization that does not participate in the competitions but providing methodological support for certain categories  |
| Participant / Team of Participants | Specialist / Team of specialists taking part in the Championship competitions  |
| Organizer                          | A team of diverse specialists supervised by the Russian Federation Ministry of Construction, and the Rosatom State Corporation, that is responsible for organizing and holding the Championship                        |
| Site of the nomination             | The site of the nomination is the location where the Participant /team of Participants completes the tasks involved in the Championship  |
| Technical expert                   | A representative from the Developer Organization that works on the site where the final stage in the Championship is held, and provides support for holding nomination competitions and the work performed by the Jury |
| Methodology                        | Nomination methodology for the preliminary and final stages by nomination  |
| Official site                      | Website for the Championship that contains complete, reliable, and updated information about the Championship  |
| Coordinator                        | A representative from the Participant Organization accompanying its delegation throughout the entire program for the Championship, including during the time periods before and after it ends                          |

## 3. QUALIFICATION CRITERIA FOR THE EXPERT JURY BY NOMINATION

3.1 Jury Expert shall mean a person who has the knowledge, professional competences, qualifications, and both the production-related and practical experience within the scope of competence for each nomination of the Championship. Jury Experts shall assess the level of

professional knowledge and practical skills held by Participants after the tasks are completed by the Participants in each nomination.

3.2 Jury Experts shall meet the professional and qualification criteria set out in Annex No.1 for each nomination.

#### 4. EXPERT JURY DESIGNATION BY NOMINATION

##### 4.1 PRELIMINARY STAGE (IF APPLICABLE)

4.1.1 During the Championship’s preliminary stage, the Jury for each nomination is put together as per the requirements outlined in the Methods, taking into account the specifics inherent in each nomination, and may consist of:

- experts from the Participant Organizations
- third-party experts involved by Participant Organizations

##### 4.2 FINAL STAGE

4.2.1 During the Championship’s final stage, the Jury for each nomination is drawn from a pool of experts fielded by Participant Organizations as per the requirements outlined in the Methods, taking into account the specifics inherent in each nomination.

4.2.2 Each Participant Organization sends a number of experts for participation in the Jury that is proportionately equal to the number of Participants that it has (in individual nominations), and to the number of Participant teams (for team nominations). This applies to the following nominations:

- the individual nomination for the Electrical Installation of Lighting Networks and Electrical Equipment competence;
- the individual nomination: Construction control (technical supervision);
- the individual nomination: Electrical Installation of Lighting Networks and Electrical The Equipment;
- the individual nomination: Electrical installation of Secondary switching;
- the team nomination: Electrical installation;
- the team nomination: Building Information Modeling and design;
- the individual nomination: Building Information Modeling;
- the individual nomination: Design of electrical part and automation systems;
- the individual nomination: Design of the architectural and construction part;
- the team nomination: Geodetic engineer;
- the team nomination: Construction project management;
- the individual nomination: Pricing and estimating standardization;

4.2.3 To do work in the Jury for the multi-team nomination “Best Construction Site”, each Participant Organization sends one declared site/team of experts that fits the following descriptions, and in the following amounts:

| Item No. | Nomination                      | Number of experts from the declared site/team  |
|----------|---------------------------------|--|
| 1        | Mounting of Process Pipelines   | 2<br>(1 expert assesses the site foreman,<br>1 expert assesses the installation fitters) |
| 2        | Labor Protection                | 1  |
| 3        | Non-destructive Testing Methods | 1  |
| 4        | General Construction Work       | 2  |

|   |                                   |  |
|---|-----------------------------------|--|
|   |                                   | (1 expert assesses the site foreman,<br>1 expert assesses the fitters and concrete<br>workers) |
| 5 | Electric Welder of Manual Welding | 1  |
|   | <b>TOTAL</b>                      | <b>7</b>   |

4.2.4 Evaluating the team nomination for the Mounting of Process Pipelines competence, the team nomination in the Labor Protection competence, the individual nomination for the Non-destructive Testing Methods competence, the team nomination for the General Construction Work competence, and the individual nomination for the Electric Welder of Manual Welding competence is done by Jury Experts from the multi-team nomination Best Construction Site, and the panel is composed of the experts indicated in Item No. 4.2.2.

4.2.5 To do work as part of the Jury for the team nomination for the C&I Equipment Mounting competence, each Participant Organization sends two experts: 1 expert to evaluate the welder, and 1 expert to evaluate the fitter.

4.3 The Expert Jury in each nomination consists of the Jury Chairman and the Jury Members. The Jury Chairman is selected from among the experts by an open voting process done by Jury Experts at the site where the Championship will be held. The expert that receives the most votes is considered to be elected as the Chairman.

The procedure for voting for the Chairman is drafted in a protocol and signed by all Jury Experts. The Report form sheet is provided in Annex No. 2.

4.4 The individual makeup of the Jury in each nomination is determined by drawing lots in all nominations for the Championship in a way so that Jury Experts cannot evaluate the work performed by Participants from organizations that they represent.

4.4.1 The timelines, locations, regulations, and format for drawing lots is determined by the Organizer, and is communicated to the Participant Organizations no later than 7 (seven) days before the start of the Championship competitions.

4.4.2 The drawing is made by the relevant Technical experts. Following the process of drawing lots, the Technical experts draft a protocol detailing the procedure for drawing lots that was accomplished.

The following are also obligated to take part in the process of drawing lots:

- people that represent the Organizer
- authorized representatives of a Participant Organizations (1 person) / the Coordinator.

The following can participate in the process of drawing lots:

- Jury Experts

4.4.3 The Organizer provides technical and organizational support, and material support, to hold the procedure for drawing lots, organizes the transfer of participants in the procedure for drawing lots to the location where it will take place, and, if drawing lots will be done in the area where the Championship is held, posts a final draw report on the Championship's official website.

4.4.4 Jury Experts play the role of observers/witnesses, and can be invited to join the procedure for drawing lots to support the Championship's main principles, such as transparency and honesty.

4.4.5 An authorized representative of a Participant Organization (1 person)/ the Coordinator takes part in the procedure for drawing lots, taking the actions that are requested by the Organizer and Technical experts, and signs off on the final draw report.

4.4.6 The procedure for drawing lots can be set up in keeping with both traditional fashion or using automated processes that incorporate special-purpose software. The Jury is put together so as to bar the possibility of a Participant being evaluated by a Jury Expert who is from the same organization.

## 5. GROUNDS AND PROCEDURE FOR REPLACING JURY EXPERTS

5.1 A Jury Expert, during the final stage of the Championship, can be replaced if that person becomes sick, or if another unforeseen situation arises that does not permit that expert to perform the functions of a competition judge.

5.2 Jury Experts can be replaced no later than 2 (two) weeks before the start of the final stage of the Championship. The Participant Organization sends the Organizer an official letter about that. The time the replacement is made is considered to be the date the Organizer sends a response to the Participant Organization that acknowledges the replacement.

5.3 The Participant Organization submits candidates to replace the expert that must meet the qualification criteria put forth for Jury Experts pursuant to Annex No. 1. Rejecting an expert must be well-founded, and done using sound reasoning.

## 6. THE POWERS OF AND RESPONSIBILITIES BORNE BY THE EXPERT JURY

6.1 The powers of, and responsibilities borne by, the Expert Jury are established by The General Order of the Championship.

6.2 The Jury, when performing its activities, takes official Championship documentation as guidance, and ensures compliance with the necessary requirements that afford each Participant/team of Participants equal conditions when they are fulfilling their Tasks.

### 6.3 PRELIMINARY STAGE

6.3.1 Before the start of the competitions, the Jury Chairman:

- Records the presence of Participants and experts at the Site of the nomination
- Holds an orientation session on labor protection and occupational safety for experts and Participants
- (if applicable) drafts a ciphered message on the work by filling in a ciphered record, which is then located with the Chairman right up until the competitions in the nomination are finished, and is not subject to disclosure.

During the competitions, the Jury Chairman:

- Organizes the work done by Jury Experts evaluating the Tasks accomplished by the Participants (but along with that does not take part in the evaluation process)
- Keeps track of compliance with the rules and the code of conduct at the Site, and compliance with judge etiquette on the part of the experts.

When the competitions are finished, the Jury Chairman:

- Collects the valuation sheets filled out by Jury Experts, counts the points for each Participant/team of Participants, decodes the work performed (if that is applicable), and records the results in the final report
- Drafts the final protocol, and arranges for it to be signed, which reflects the final points earned by each Participant/Team of participants, the winner, and prizewinners (2nd and 3rd place)
- Analyzes the results for the Participants/team of Participants to make sure that the number of final points match up
- Drafts the report for Participants in the nomination to familiarize themselves with the final assessment report.

6.3.2 Jury Experts in the nomination assess how Participants/teams of Participants fulfill their Tasks objectively and dispassionately, comprehensively and completely, following procedure and the assessment criteria.

Before the start of the competitions, a Jury Member:

- Goes through a labor protection and occupational safety training session, and signs off on the training session report
- Familiarizes the Participants/teams of Participants with the Task content, the assessment criteria for it, the regulations for the work, and the code of conduct at the Site
- Gives Participants the working tools to accomplish their Tasks.

While the competitions are in progress, a Jury Member:

- Keeps track of compliance with the conditions governing execution of the Task on the part of Participants and other experts, and reports to the Jury Chairman about every incident involving violations of the conditions for the competitions
- Resolves day-to-day issues with the Participants and the Jury Chairman, including gathering together any comments/suggestions on the content and form of the Tasks, the evaluation strategy, and the methods for organizing and holding the Championship.

When the competitions are finished, the expert:

- Checks how the various scopes of work are done by the Participants/teams of Participants, taking into account how they are distributed by the Jury Chairman
- Writes down the assessment results in the report, and registers them by signing that
- signs the final report for the nomination.

## **6.4 FINAL STAGE**

6.4.1 The Jury Chairman does not cast the deciding vote. The requirements for the objectives set for Jury Members also apply to the Jury Chairman.

Before the start of the competitions, the Jury Chairman:

- Together with the Technical experts, takes note that the Participants and Jury Experts for the nomination are present on the Site, and drafts and signs the appropriate report.

While the competitions are in progress, the Chairman:

- Keeps track of compliance with the rules and code of conduct at the Site, and of compliance with judge etiquette on the part of Jury Experts
- drafts the documents requested by the Technical experts
- resolves day-to-day issues that arise with the Participants
- Checks on how work is done by Participants fulfilling the Tasks
- At the established time, familiarizes the Participants with the interim results (if that is applicable)

When the competitions are finished, the Jury Chairman:

- Collects the valuation sheets filled out by the experts, drafts the final report, and arranges for it to be signed, which reflects the final points earned by each Participant/team of Participants, the winner, and prizewinners (2nd and 3rd place)
- Analyzes the results for the Participants/team of Participants to make sure that the number of final points match up
- Controls the process by which Participants in the nomination familiarize themselves with the final assessment report;
- Endorses, and transmits to the Organizer, all of the documents that were drafted by the Jury Experts while the competitions were in progress for the nomination

6.4.2 Jury Experts in the nomination assess how Participants/teams of Participants fulfill their Tasks objectively and dispassionately, comprehensively and completely, following procedure and the assessment criteria both provided by the Technical experts and outlined in the Methods.

Before the start of the competitions, a Jury Expert:

- Goes through a labor protection and occupational safety training session, and signs off on the training session report
- Together with the Technical experts, familiarizes the Participants/teams of Participants with the Task content, the assessment criteria for it, the regulations for the work, and the code of conduct at the Site
- Together with the Technical experts, gives Participants the working tools to accomplish their Tasks.

While the competitions are in progress, a Jury Expert:

- Keeps track of compliance with the conditions to fulfill the Task on the part of the Participants and other Jury Experts
- resolves day-to-day issues that arise with the Participants
- Checks on how work is done by Participants fulfilling the Tasks
- At the established time, familiarizes the Participants with the interim results (if that is applicable)

When the competitions are finished, the Jury Expert:

- Final results in the report, and registers them by signing that
- signs the final report for the nomination.

6.4.3 Jury Experts bear responsibility for:

- Ensuring objective, dispassionate officiating in the context of the relevant nomination
- Ensuring compliance with The Methods and The General Order of the Championship, The Provision for the Review Boards for the Nominations, and this Procedure;
- Deliver substantiated opinions that provide the opportunity to check the accuracy of any conclusions made by using technical regulations and practical data
- Conveying the interim results and tallied points to the Participants in accordance with the assessment criteria, confirming that the Participant is familiar with the valuation sheets and reports, and has signed off on them.

## 7. DESCRIPTION OF THE SPECIAL CASES AND ASSUMPTIONS INVOLVED

7.1 When issues that spark controversy, other situations, arise that are not described in this document, when the Championship's nominations are being held, and when work on the Tasks is in progress, it is possible that the Jury might make certain exceptional decisions. The decision is made by a majority vote. For each exceptional decision (group of decisions), a report is drafted that all Jury Members must sign.

7.2 Incidents involving violations of the requirements in the The General Order of the Championship, The Expert Jury Operation Procedure, and The Methodology cannot be considered exceptional, and must be resolved in accordance with those documents.

## 8. EXPERT JURY WORKING TOOLS

8.1 During the work done by the Jury on the Site of the nomination, equipment, software, materials, tools, and measurement devices are used that are identical to those used by the Participants.



8.2 The list and forms for the valuation sheets for the Jury to do work during the final stage are provided by the Technical experts. The list and forms for the valuation sheets for the Jury to do work during the preliminary stage are established by the annex to the Methodology.

## 9. TRAINING JURY EXPERTS IN THE NOMINATIONS (applicable to the final stage)

9.1 To support the procedure involving high-quality officiating, and to standardize the interpretation of the assessment criteria for the Tasks during the final stage, Jury Experts for the nominations have to undergo mandatory training.

The Technical experts bear responsibility for organizing and providing methodological support for the training sessions.

Training Jury Experts is done before the Championship's final stage, either face-to-face or remotely, and in time frames established by the Organizer.

9.2 The training program includes no fewer than 5 training hours devoted to studying the Tasks' content in the nominations and their assessment criteria, becoming familiar with the equipment, software, and regulatory documents that are used by the Participants and experts while the competitions in the nominations are in progress.

The Technical experts provide support for the training process and giving the Jury Experts with the necessary methodological materials for their training sessions.

Following the training sessions for the Expert Juries in the nominations, the Technical expert uses an official form from that person's organization, signed by its director, to provide the Organizer with the appropriate supporting documentation. Those documents indicate the list of experts that were present during the training events.

## 10. EXPERT JURY OPERATING PROCEDURE (applicable to the final stage)

10.1 The first meeting of Jury Experts is held one day before the beginning of the Championship's final stage. The location and time the meeting is held is determined by the Organizer.

10.2 The Jury arrives at the Site for the competitions in conformance with the time established by the Organizer.

10.3 After arriving at the Site for the competitions, upon request by the Technical experts the Jury does an inspection on, and endorses, the Participants' workplaces.

10.4 During the time that Participants are officially fulfilling their Tasks, Jury Experts need to continuously be present at the Site, and conduct assessment procedures.

10.5 The results of the Task completed by the Participants shall be evaluated by the Jury in accordance with the assessment criteria within 2 (two) days of the final competition (if applicable).

10.6 The Jury shall provide the participants with final results and valuation sheets for review. Participants confirm that they have familiarized themselves with the results by signing the valuation sheets.

## 11. PROCEDURES FOR ON-SITE INTERACTION

11.1 Interaction among Jury Experts, Participants, and other people located at the Site is accomplished in keeping with the requirements outlined in The General Order of the Championship, The Methods, and these Regulations.

## Qualification and professional requirements for Expert Jury Members by nomination

### 1. The multi-team nomination “Best construction site”

#### 1.1 Team nomination: Mounting of process pipelines

| Item No. | Name   | Contents   |
|----------|--|--|
| 1.       | Qualification criteria                               | A higher professional (technical) education, and period of employment in construction in engineering and technical jobs for no fewer than 5 years. A higher education (not specialized) and complementary professional education - professional training/retraining programs in the appropriate field of activity.   |
| 2.       | Requirements for practical work experience           | No fewer than three years of specialized professional activity in the field of construction.   |
| 3.       | Professional competences (professional requirements) | Operational control of individual construction processes and/or production operations<br>Compliance control of the positions of the elements, structures, and parts of the capital construction project (buildings, infrastructure), and the utility systems, with the requirements outlined in technical and engineering specification documentation<br>In-process quality control of construction work results<br>Identifying the reasons why the results of construction work deviate from the requirements outlined in technical and engineering specification documentation<br>Acceptance inspections on the finished scopes and stages of construction work (the components, structures, parts of the buildings (infrastructure, facilities), and utility systems) |
| 8.       | Requirements for the job functions                   | Drafting recordkeeping and reporting documentation.<br>Execution control to ensure compliance on the part of the results of construction work with the requirements outlined in technical regulation documents, and with the conditions stipulated in construction contractor agreements<br>Furnishing the results of construction work and as-built technical documentation to those responsible for checking it  |

|     |                                     |  |
|-----|-------------------------------------|--|
|     |                                     | Carry out compliance assessment of performance of production tasks and finishing works are executed  |
|     |                                     | Controlling the measures taken on the construction site to hold training sessions for the workers, and how they comply with labor protection, fire safety, and environmental protection requirements       |
|     |                                     | Work technology for various kinds of construction work   |
| 14. | Requirements in terms of knowledge: | The requirements in process and project documentation for the scope and quality of doing construction work at the capital construction project   |
|     |                                     | The requirements in the process and technology-related documentation for the scope and content of operations control over construction processes and/or production operations when doing construction work |
|     |                                     | The requirements in the process documentation for the procedure to accept hidden works and building structures that have an impact on safety for the capital construction project                          |
|     |                                     | Methods and means of the instrumentation quality control for the results of construction work  |
|     |                                     | Operational quality control process flowcharts for construction work   |
|     |                                     | Methods and means for remedying defects in the results of construction work (using alternative work technologies, materials, and components)   |
|     |                                     | Procedure for drafting internal quality assurance reporting documentation for construction work  |
|     |                                     | Technical specifications that govern doing and accepting construction, installation, and pre-commissioning work  |
|     |                                     | Methods for organizing, and the technology used in performing, construction work   |
|     |                                     | The features inherent in construction work at hazardous, technically complex, and unique capital construction projects   |
|     |                                     | Labor protection and fire safety requirements when doing construction work   |
| 25. | Requirements for skills             | Control compliance with the production conditions outlined in the process flowcharts and regulations   |
|     |                                     | Perform visual and instrumental quality control of construction work results   |
|     |                                     | Perform visual and instrumental (geodetic) element position control, structures, and parts of the capital construction project (buildings, infrastructure), and the utility systems                        |
|     |                                     | Carry out a comparative compliance analysis of process control data on the results of construction work with the requirements outlined in technical regulation and project documentation                   |

|     |   |  |
|-----|---|--|
|     |   | Identifying the reasons why the results of construction work deviate from the requirements outlined in the technical, technology-related, and engineering specification documentation                              |
|     |   | Provide documentary support of operational quality control results (operational quality control log, hidden works acts, and certificates of intermediate acceptance of responsible structures)                     |
|     |   | Do work with the project cost estimate documentation (read drawings, determine the estimated manpower effort and how the weight of the materials in the cost estimate matches up with the project specifications). |
|     |   | Provide and control documentary support of control results over the fulfillment of requirements, fire safety, and environmental protection requirements, and industrial safety requirements                        |
| 33. | Requirements put forth for skills in the area of mounting process pipelines | To check the project documentation's completeness and quality  |
|     |   | Assess the conformity of technical information provided with the requirements outlined in technical regulation documentation   |
|     |   | To accept and check the completeness for the components, assemblies, and elements in the pipeline reinforcements, and equipment  |
|     |   | Check the conformity of the labeling with the design drawings  |
|     |   | Execution control of works as part of heat equipment installation  |
|     |   | Control status of the equipment's external surfaces, and the pipeline elements and fittings  |
|     |   | Control compliance on the part of the technology used to do heat equipment installation work, the form of the welding grooves, and the condition of the internal surfaces on the alignment edges to be welded      |
|     |   | To control over the condition of the welding joints by external inspection, etc.   |

### 1.2 The individual nomination: Electric welder of manual welding

| Item No. | Name                   | Contents   |
|----------|------------------------|--|
| 1.       | Nomination Name        | <b>“Electric welder of manual welding”</b>   |
| 2.       | Qualification criteria | Vocational education in “Welding production”, higher professional education in “Welding work equipment and technology” or “Welding and related processes”. |

|    |  |  |
|----|--|--|
| 3. | Requirements for practical work experience           | No fewer than three years of specialized professional activity in the field of welding production.   |
| 4. | Professional competences (professional requirements) | Control preparation and welding fitting work   |
|    |  | Control of welding and auxiliary welding consumables, controlling the prepared edges to be welded, and the geometric dimensions of parts   |
|    |  | Controlling the succession of welding operations, welding work, control of welding modes, and control of the operation of the welding machine tools.   |
|    |  | Technical inspection on work producing and installing the welded structures pursuant to the production technology documentation.   |
| 5. | Requirements for the job functions                   | Controlling the preparation work on components in the welded structures and how they are fitted for welding.   |
|    |  | Determine compliance on the part of the preparation work done on the components in the welded structure with the requirements in the production technology documentation.  |
|    |  | Controlling adherence to welding techniques and technology during the process of performing welding work.  |
|    |  | Doing visual inspections and instrumentation monitoring on the facility being put together (the welded structure), and pinpointing any incidents involving noncompliance on the part of the welding joints with the requirements stipulated in the production technology and regulatory documentation. |
|    |  | Controlling, in the area where welding work is being performed, the measures taken to ensure that workers adhere to labor protection, industrial hygiene, industrial safety, and fire safety requirements.   |
| 6. | Requirements in terms of knowledge:                  | The main types, structural components, and dimensions of welding joints, the symbol designations used for welding seams in drawings.   |
|    |  | The requirements outlined in production technology and regulatory documentation for welding.   |
|    |  | The rules and methods used to prepare the surfaces and edges on the products that are to be welded   |
|    |  | The allowable tolerances when preparing and fitting welding structures.  |
|    |  | Welding techniques and technology.   |
|    |  | The types of welding defects that exist, what causes them, the methods to prevent them, and the ways to remedy them.   |

|    |   |   |
|----|---|---|
|    |   | The purpose, arrangement, and procedure for using controls (measurement devices, equipment, optical instruments).   |
|    |   | Requirements for the quality of welding joints.   |
|    |   | The types and methods of control used for fitted structures and welding seams that have been prepared for welding.  |
|    |   | The methodology for visual inspections and instrumentation monitoring on welding joints.  |
|    |   | The rules and standards for fire safety when welding work is being performed.   |
|    |   | Labor protection requirements for welding work.   |
| 7. | Requirements for skills                             | The skill to apply production technology documentation for fitting and welding.   |
|    |   | Determine compliance on the part of the preparation work done on the components in the welded structure, and how they are fitted for welding, with the requirements in the production technology documentation. |
|    |   | Doing visual inspections and instrumentation monitoring on the external defects in welding seams, using measurement devices to establish the geometric dimensions of welding joints and structures.             |
|    |   | Detect violations of processes of execution of works  |
| 8. | Requirements for skills in the area of welding work | Control the quality of parts preparation of the pipeline parts, and the components in the structures to be welded   |
|    |   | Control the quality of parts assembly done on the pipeline parts, and the components in the structures to be welded   |
|    |   | Control execution quality on the tack welds for the pipeline components in accordance with the requirements in the production technology documentation (PTD).   |
|    |   | Control execution quality for manual argon arc welding quality as per the requirements in the PTD.  |
|    |   | Control execution quality for manual arc welding covered  |
|    |   | Control compliance with labor inspection and work safety requirements.  |

### 1.3 The team nomination: Occupational health and safety

| Item No. | Name                   | Contents   |
|----------|------------------------|--|
| 1.       | Nomination Name        | Labor Protection (area of focus: organizing safe work during construction)               |
| 2.       | Qualification criteria | A higher professional (technical) education, and period of employment in construction in |

|    |  |  |
|----|--|--|
|    |  | engineering and technical jobs for no fewer than 5 years. A higher education (not specialized) and complementary professional education - professional training/retraining programs in the appropriate field of activity, for example: “Technosphere safety”, or NEBOSH, or ISO 45001. |
| 3. | Requirements for practical work experience           | No fewer than five years of specialized professional activity in the field of construction.  |
| 4. | Professional competences (professional requirements) | The skill to set up an OH&S system management to eliminate, or minimize, the risks for employees and other stakeholders that could be subjected to OH&S hazards linked to the activity performed by the organization   |
|    |  | Knowledge of legislative and organizational documents in the area of technological process safety.   |
|    |  | Knowledge of the procedures to investigate incidents, accidents, and personal injury, or pinpointing their root causes.  |
|    |  | To identify and assess the risks when performing work.   |
|    |  | Knowledge of the procedure to set up how first aid is provided when there is an incident involving personal injury at a production facility.   |
| 5. | Requirements for the job functions                   | Execution control of measures taken to ensure technological process safety with the requirements stipulated in technical regulation documentation  |
|    |  | Providing the results of the work performed, and the HSE documents, to those responsible for checking that   |
|    |  | Execution control of the tasks and finishing works   |
|    |  | Controlling the measures taken on the construction site to hold training sessions for the workers, and how they comply with labor protection, fire safety, and environmental protection requirements   |
|    |  | Controlling the measures taken that are geared towards identifying and assessing professional risks  |
| 6. | Requirements in terms of knowledge:                  | Knowledge of the processes involving in recognizing when hazards exist, and defining their characteristics.  |
|    |  | Knowledge of the conditions and factors that have an impact, or are capable of having an impact, on the health and safety of workers, temporary workers, visitors, and any people located in the work area.  |

|    |   |  |
|----|---|--|
|    |   | <p>Knowledge of the methods and standards to provide first aid using the methods employed by the Red Cross, EFR, or other, similar international standards governing how first aid is given.</p> <p>Knowing the composition and contents of the personal protective equipment packages used in the construction industry.</p>  |
| 7. | Requirements for skills   | <p>Knowing how to apply the legislative requirements in the area of professional health and safety for people located directly in the work area, or for those people that are impacted by the activity performed in the work area.</p> <p>The skill to apply the measurable results obtained from the OH&amp;S risk management system of the organization</p> <p>The skill to set up the risk assessment process for the risks posed by hazards, taking into account the sufficiency of existing management measures, and making the decision on whether to allow the risk or not</p>  |
| 8. | Requirements for knowledge when the Championship is in progress | <p>To check the project documentation's completeness and quality</p> <p>Assess the conformity of technical information provided with the requirements outlined in technical regulation documentation</p> <p>To receive documents in electronic form: Word, Excel, legal reference systems</p> <p>The skill to put in place a systematic, autonomous, documented process for obtaining evidence from an audit, and evaluating it objectively to establish the degree to which the audit criteria have been fulfilled</p> <p>The skill to evaluation the action taken to root out the cause of any noncompliance, or other undesirable situation, that has been discovered</p> <p>Knowledge of the methods and standards to provide first aid using the methods employed by the Red Cross, EFR, or other, similar international standards governing how first aid is given.</p> <p>Knowing the composition and contents of the personal protective equipment packages used in the construction industry.</p> |

#### 1.4 The individual nomination: Non-destructive testing methods

| Item No. | Name                   | Contents                                     |
|----------|------------------------|--|
| 1.       | Nomination Name        | <b>“Non-destructive Testing Methods”</b>     |
| 2.       | Qualification criteria | Technical professional education (Bachelor's |



|    |  |   |
|----|--|---|
|    |  | degree, Master's degree, technician, engineer)<br>Specialist's certification on using non-destructive testing methods (visual and measurement testing)<br>no less than level III professional training  |
| 3. | Requirements for practical work experience           | Total period of employment - no fewer than 5 years in an engineer position (foreman, section foremaster, engineer, process monitoring system specialist, etc.). Period of employment in construction - no fewer than 3 years in an engineer position (foreman, section foremaster, engineer, process monitoring system specialist, etc.).   |
| 4. | Professional competences (professional requirements) | Control preparation and welding fitting work<br>Doing visual inspections and instrumentation monitoring on the facility being put together (the welded structure), and pinpointing any incidents involving noncompliance on the part of the welding joints, and the facility as a whole, with the requirements stipulated in the production technology and regulatory documentation.<br>Developing the technological process flowcharts (for visual, measurement, and operation control)<br>Conducting technological operations involving visual and measurement control<br>Non-destructive testing as per the technological process flowchart  |
| 5. | Requirements for the job functions                   | Controlling the preparation work on components in the welded structures and how they are fitted for welding.<br>Determine compliance on the part of the preparation work done on the components in the welded structure, with the requirements in the production technology documentation.<br>Identification of the type of surface discontinuity and the type of deviation in the shape of the control object<br>Measuring the parameters for surface discontinuities and the deviations in the shape of the control object<br>Technical inspection on work producing and installing the welded structures pursuant to the production technology and as-built documentation.<br>Verifying the results of operation and acceptance control for the welded structures<br>Recording the results of visual and instrumentation control<br>Controlling how the acceptance and as-built documentation is drafted following the results of welding work execution control |
| 6. | Requirements in terms of knowledge:                  | The main types, structural components, and dimensions of welding joints, the symbol designations used for welding seams in drawings.  |

|    |  |   |
|----|--|---|
|    |  | The requirements outlined in production technology and regulatory documentation for welding and control   |
|    |  | The rules and methods used to prepare the surfaces and edges on the products that are to be welded  |
|    |  | The allowable tolerances when preparing and fitting welding structures.   |
|    |  | The types and methods of control used for fitted structures and welding seams that have been prepared for welding.  |
|    |  | The types of defects that can arise during welding, the reasons why they form   |
|    |  | The purpose, arrangement, and procedure for using controls (measurement devices, equipment, optical instruments).   |
|    |  | The rules for taking measurements using non-destructive testing equipment   |
|    |  | Requirements for the quality of welding joints  |
|    |  | The methodology for visual inspections and instrumentation monitoring on welding joints   |
|    |  | Quality indicators for the control object following the results of visual and instrumentation control   |
|    |  | Requirements for recording the results of the control process   |
| 7. | Requirements for skills  | The skill to apply production technology documentation for fitting, welding, and control  |
|    |  | Determine compliance on the part of the preparation work done on the components in the welded structure, and how they are fitted for welding, with the requirements in the production technology documentation. |
|    |  | Drafting documentation (acts, expert opinions) following control of the preparatory and fitting work  |
|    |  | Doing visual inspections and instrumentation monitoring on the external defects in welding seams, using measurement devices to establish the geometric dimensions of welding joints and structures.             |
|    |  | Detect violations of processes of execution of works  |
|    |  | Determining the surface discontinuities, and deviations in the shape of the control object, in accordance with their external signs   |
|    |  | To register the results of visual and instrumentation control in conformance with the requirements stipulated in the operating procedures   |
| 8. | Requirements put forth for skills in the area of non-destructive testing methods | incoming inspection control of welding consumables as per established requirements  |
|    |  | Controlling adherence to the succession of technological operations during fitting work on the  |

|  |  |
|--|--|
|  | tack welds and welding the seams   |
|  | Quality control work on the production technology documentation  |
|  | Controlling the preparation work on components in the welded structures and how they are fitted for welding.                           |
|  | Operations control when fitting the components for welding   |
|  | Operations control during the welding process  |
|  | Controlling the work execution of visual and instrumentation control of the welding joints for the pipelines and structural components |
|  | Controlling how the relevant documents are drafted following visual and instrumentation control  |

### 1.5 The team nomination: General construction work

| Item No. | Name   | Contents   |
|----------|--|--|
| 1.       | Nomination Name                                      | “General construction work”  |
| 2.       | Qualification criteria                               | A higher professional (technical) education, and period of employment in construction in engineering and technical jobs for no fewer than 5 years. A higher education (not specialized) - a Bachelor’s degree and/or complementary professional education - professional retraining programs in the appropriate field of activity  |
| 3.       | Requirements for practical work experience           | No fewer than three years of specialized professional activity in the field of construction  |
| 4.       | Professional competences (professional requirements) | Operational control of individual construction processes and/or production operations<br>Compliance control of the positions of the elements, structures, and parts of the capital construction project (buildings, infrastructure) with the requirements outlined in the technical and engineering specification documentation<br>In-process quality control of construction work results<br>Identifying the reasons why the results of construction work deviate from the requirements outlined in technical and engineering specification documentation<br>Acceptance inspections on the finished scopes and stages of construction work (the components, structures, parts of the buildings (infrastructure, facilities), and utility systems) |
| 5.       | Requirements for the job functions                   | Execution control of the measures taken to ensure compliance on the part of the results of construction work with the requirements outlined in technical regulation documents<br>Furnishing the results of construction work and as-   |

|    |                                     |  |
|----|-------------------------------------|--|
|    |                                     | built technical documentation to those responsible for checking it   |
|    |                                     | Doing compliance assessment on how the production tasks and finishing works are executed   |
|    |                                     | Controlling the measures taken on the construction site to hold training sessions for the workers, and how they comply with labor protection, fire safety, and environmental protection requirements       |
|    |                                     | The technology for performing general construction work  |
| 6. | Requirements in terms of knowledge: | The requirements in process and project documentation for the scope and quality of doing construction work at the capital construction project   |
|    |                                     | The requirements in the process and technology-related documentation for the scope and content of operations control over construction processes and/or production operations when doing construction work |
|    |                                     | The requirements in the process documentation for the procedure to accept hidden works and building structures that have an impact on safety for the construction project                                  |
|    |                                     | Methods and means of the instrumentation quality control for the results of construction work  |
|    |                                     | Operational quality control process flowcharts for construction work   |
|    |                                     | Methods and means for remedying defects in the results of construction work (using alternative work technologies, materials, and components)   |
|    |                                     | Procedure for drafting internal quality assurance reporting documentation for construction work  |
|    |                                     | Technical specifications that govern doing and accepting construction, installation, and pre-commissioning work  |
|    |                                     | Methods for organizing, and the technology used in performing, construction work   |
|    |                                     | The features inherent in construction work at hazardous, technically complex, and unique capital construction projects   |
|    |                                     | Labor protection and fire safety requirements when doing construction work   |
| 7. | Requirements for skills             | Control compliance with the production conditions outlined in the process flowcharts and regulations   |
|    |                                     | Perform visual and instrumental quality control of construction work results   |
|    |                                     | Perform visual and instrumental element position control, structures, and parts of the capital construction project (buildings, infrastructure), and the utility systems                                   |
|    |                                     | Carry out a comparative compliance analysis of process control data on the results of construction   |

|    |  |   |
|----|--|---|
|    |  | work with the requirements outlined in technical regulation and project documentation   |
|    |  | Identifying the reasons why the results of construction work deviate from the requirements outlined in the technical, technology-related, and engineering specification documentation   |
|    |  | Provide documentary support of operational quality control results of general construction work (operational quality control log, hidden works acts, and certificates of intermediate acceptance of responsible structures)   |
|    |  | Carry out documentary support of acceptance control (operational quality control log, hidden works acts, and certificates of intermediate acceptance for responsible structures)  |
|    |  | Provide and control documentary support of control results over the fulfillment of requirements, fire safety, and environmental protection requirements, and industrial safety requirements   |
| 8. | Requirements for skills in the area of general construction work | Assess the conformity of technical information provided with the requirements outlined in technical regulation documentation  |
|    |  | To receive and check the work in conformance with the requirements outlined in regulatory documentation   |
|    |  | Check the conformity of the labeling with the design drawings   |
|    |  | Controlling adherence to the technology for executing and fulfilling general construction work: the rules for installing anchor bolts and embedded fittings into the structures being erected; aligning the mesh mats and frameworks that have been installed; the rules for beveling rebar; the rules for marking, and then aligning with the drawings and schematics, where the locations are in the mounting jig or marking template for the rods, simple mesh, and plane frames; the methods to connect the reinforcement roads; the types and classes of reinforcement elements. |
|    |  | Control the status of the reinforcement elements, and the quality of the work done to reinforce the structures, in conformance with the requirements in the technical, technological, project, and detailed design documentation when the reinforcement frame is being produced and fitted.   |

## 2. The individual nomination: Construction control (technical supervision)

| Item No. | Name | Contents |
|----------|------|----------|
|----------|------|----------|

|    |  |   |
|----|--|---|
| 1. | General description of the competence          | A specialist that does building inspection and/or organizes building inspection work during the construction of industrial facilities, or performs the function of controlling and supervising industrial construction  |
| 2. | Requirements for qualifications / profession   | A specialist with a specialized higher (higher professional) education in the areas of training or specialties in industrial and civil construction, or with a higher education in non-specialized areas of training and specialties that have gone through professional retraining in industrial and civil construction.<br>Work experience: no fewer than 5 years in positions linked to doing and/or organizing building inspection work during industrial facility construction   |
| 3. | Requirements for special permits and documents | Documents are required that validate the relevant education and level of qualification, and professional retraining (if that exists). No special permits are required   |
| 4. | Requirements for the job functions             | Doing and/or organizing work performed on building inspection during industrial facility construction   |
| 5. | Requirements for advanced training             | None established (given a higher specialized (higher professional) education in the areas of training or specialties in industrial and civil construction)  |
| 6. | Requirements in terms of knowledge:            | <i>Must know how to:</i><br>The legislative regulatory acts, technical regulations, and governing documents that regulate urban planning and development activities in EAEU member countries<br>Legislative regulatory acts in the area of technical and fire safety in EAEU member countries<br>The makeup, content, and requirements in the documentation about creating (reconstructing, repairing, functioning) the facilities involved in urban planning and development activities in EAEU countries<br>The methods used to plan work during construction, reconstruction, and deinstallation<br>The technologies used in construction work<br>The product range and properties of the materials used in building structures<br>Engineering drawings and construction draftsmanship<br>The governing documents for developing and compiling the technical documentation in urban planning and development activities in EAEU member countries<br>The principles for a safety culture<br>Labor protection requirements |

|    |                         |  |
|----|-------------------------|--|
|    |                         | National and international quality standards   |
| 7. | Requirements for skills | <p><i>Must know how to:</i></p> <p>Analyze technical documentation</p> <p>Read construction drawings</p> <p>Analyze the suitability of construction materials, semi-finished products, and components to do construction work, and reconstruction and deinstallation work</p> <p>Analyze the quality and scopes of the work accomplished</p> <p>Draft examination certificates for hidden works, and examination certificates for responsible structures</p> <p>Use regulatory and reference materials and instructions (including knowing how to work in the reference document systems Konsultant Plyus, Tekhekspert)</p> <p>Work with a computer as a user and use specialize software (AutoCAD, MS Office)</p> <p>Process information pursuant to valid regulatory documentation</p> <p>Determine the needs on the part of construction work for material, technical, and manpower resources</p> |

### 3. The team nomination: Construction project management

| <b>Item No.</b> | <b>Name</b>  | <b>Contents</b>  |
|-----------------|--|--|
| 1.              | Level of education   | Secondary professional education Specialist degree or Master's degree.   |
| 2.              | Education documentation  | Diploma for higher professional education  |
| 3.              | Period of employment (total, in the industry, in construction) | Total period of employment - no fewer than 5 years.  |
| 4.              | Project experience   | <p>Experience with managing projects.</p> <p>Experience in teaching and training personnel in the area of cost engineering, and training specialists and managers in cost engineering.</p> <p>Experience with developing statements of work.</p> <p>Experience assessing professional competences in project management.</p>   |
| 5.              | Complementary professional education (refresher course)        | Refresher course in complementary professional education programs (in the area of "Construction") for managers and specialists, preferably in specialized programs for complementary professional education for engineering and technical personnel that perform their professional activities in the area of developing cost estimate documentation, building inspection, managing construction projects, and information modeling. |

| <b>Item No.</b> | <b>Name</b>   | <b>Contents</b>  |
|-----------------|---|--|
| 6.              | Certification in the requirements put forth by the regulatory authorities (in the areas of focus for the competences)                                   | For the nominations' competences (not a mandatory requirement)   |
| 7.              | Experience with participating as an expert in professional skill championships (intra-corporate, industry, national, regional, European, international) | Experience participating in a competition jury and competition nominations for project management and cost engineering   |
| 8.              | Additional requirements (restrictions)  | Objectivity, comprehensiveness, and completeness of the assessment.<br>The expert conducts the assessment objectively, using the scenario and competences observed, assigning points to teams. |

#### 4. The team nomination: Electrical installation

| <b>Item No.</b> | <b>Name</b>  | <b>Contents</b>   |
|-----------------|--|---|
| 1.              | Qualification criteria                               | A higher professional (technical) education, and period of employment in power engineering in engineering and technical positions for no fewer than 5 years. A higher education (not specialized) and complementary professional education - professional training/retraining programs in the appropriate field of activity.  |
| 2.              | Requirements for practical work experience           | No fewer than three years of specialized professional activity in the field of electrical engineering   |
| 3.              | Professional competences (professional requirements) | Operational control of electrical installation processes and/or production operations<br>Compliance control of the positions of the elements, structures, and parts of the capital construction project (buildings, infrastructure), and the utility systems, with the requirements outlined in technical and engineering specification documentation<br>In-process quality control of electrical work results<br>Identifying the reasons why the results of electrical installation work deviate from the requirements outlined in technical and engineering specification documentation<br>Acceptance inspections on the finished types and stages of electrical installation work. |
| 8.              | Requirements for the job functions                   | Execution control of how the measures are taken to ensure compliance on the part of the results of electrical installation work with the requirements outlined in technical regulation documents, and with the conditions stipulated in construction contractor agreements  |



|     |                                     |  |
|-----|-------------------------------------|--|
|     |                                     | <p>Furnishing the results of electrical installation work and as-built technical documentation to those responsible for checking it</p> <p>Carry out compliance assessment of performance of production tasks and finishing works are executed</p> <p>Controlling the measures taken on the electrical installation work site to hold training sessions for the workers, and how they comply with labor protection, fire safety, and environmental protection requirements</p> <p>Executing various types of electrical installation work</p>  |
| 13. | Requirements in terms of knowledge: | <p>The requirements in process and project documentation for the scope and quality of doing electrical installation work at the capital construction project</p> <p>The requirements in the process and technology-related documentation for the scope and content of operations control over construction processes and/or production operations when doing electrical installation work</p> <p>The requirements in the process documentation for the procedure to accept hidden works that have an impact on safety for the capital construction project</p> <p>Methods and means of the instrumentation quality control for the results of electrical installation work</p> <p>Operational quality control process flowcharts for electrical installation work</p> <p>Methods and means for remedying defects in the results of electrical installation work (using alternative work technologies, materials, and components)</p> <p>Procedure for drafting internal quality assurance reporting documentation for electrical installation work</p> <p>Technical specifications that govern doing and accepting electrical installation and pre-commissioning work</p> <p>Methods for organizing, and the technology used in performing, electrical installation work</p> <p>The features inherent in electrical installation work at hazardous, technically complex, and unique capital construction projects</p> <p>Labor protection and fire safety requirements when doing electrical installation work</p> |
| 24. | Requirements for skills             | <p>Control compliance with the production conditions outlined in the process flowcharts and regulations</p> <p>Perform visual and instrumental quality control of electrical work results</p> <p>Perform visual and instrumental element position control, structures, and parts of the capital</p>  |

|     |   |   |
|-----|---|---|
|     |   | <p>construction project (buildings, infrastructure), and the utility systems</p> <p>Carry out a comparative compliance analysis of process control data on the results of electrical installation work with the requirements outlined in technical regulation and project documentation</p> <p>Identifying the reasons why the results of electrical installation work deviate from the requirements outlined in the regulatory, technology-related, and engineering specification documentation</p> <p>Provide documentary support of operational quality control results (operational quality control log, hidden works acts, and acceptance certificates)</p> <p>Carry out documentary support of acceptance control in the documents called for in the current quality control system at the organization (work logs, hidden works acts, and certificates of intermediate acceptance for responsible structures)</p> <p>Perform work with project cost estimate documentation (reading drawings, specifications)</p> <p>Provide and control documentary support of control results over the fulfillment of requirements, fire safety, and environmental protection requirements, and industrial safety requirements</p> |
| 33. | Requirements for the skills involved in the work mounting cabling networks and electrical equipment | <p>To check the project documentation's completeness and quality for high-voltage power networks and electrical equipment</p> <p>Assess the conformity of technical information provided with the requirements outlined in technical regulation documentation</p> <p>To receive and check the completeness of the materials and equipment to do work mounting cabling networks and electrical equipment, and terminal boxes.</p> <p>To check the conformity of cable markings, the cable cores, and cable terminal boxes with the design engineering drawing and technical regulation documentation</p> <p>Carry out the control of works execution installing electrical equipment, mounting cable metal structures, laying down cable, and installing the seal ends and couplings for cables up to 35 KV</p> <p>Control compliance with work technology for mounting cabling networks and installing electrical equipment</p>   |

**5. The individual nomination: Electrical Installation of Lighting Networks and Electrical Equipment**

| <b>Item No.</b> | <b>Name</b> | <b>Contents</b> |
|-----------------|-------------|-----------------|
|-----------------|-------------|-----------------|

|    |  |   |
|----|--|---|
| 2. | Qualification criteria                               | A higher professional (technical) education, and period of employment in power engineering in engineering and technical positions for no fewer than 5 years. A higher education (not specialized) - a Bachelor's degree and complementary professional education in the appropriate field of activity   |
| 3. | Requirements for practical work experience           | No fewer than three years of specialized professional activity in the field of electrical engineering   |
| 4. | Professional competences (professional requirements) | <p>Operational control of electrical installation processes and/or production operations</p> <p>Compliance control of the positions of the elements, structures, and parts of the capital construction project (buildings, infrastructure), and the utility systems, with the requirements outlined in technical and engineering specification documentation</p> <p>In-process quality control of electrical work results</p> <p>Identifying the reasons why the results of electrical installation work deviate from the requirements outlined in technical and engineering specification documentation</p> <p>Acceptance inspections on the finished types and stages of electrical installation work.</p>  |
| 5. | Requirements for the job functions                   | <p>Execution control of how the measures are taken to ensure compliance on the part of the results of electrical installation work with the requirements outlined in technical regulation documents, and with the conditions stipulated in construction contractor agreements</p> <p>Furnishing the results of electrical installation work and as-built technical documentation to those responsible for checking it</p> <p>Carry out compliance assessment of performance of production tasks and finishing works are executed</p> <p>Controlling the measures taken on the electrical installation work site to hold training sessions for the workers, and how they comply with labor protection, fire safety, and environmental protection requirements</p> <p>Executing various types of electrical installation work</p> |
| 6. | Requirements in terms of knowledge:                  | <p>The requirements in process and project documentation for the scope and quality of doing electrical installation work at the capital construction project</p> <p>The requirements in the process and technology-related documentation for the scope and content of operations control over construction processes and/or production operations when doing electrical installation work</p> <p>The requirements in the process documentation for</p>  |

|    |                         |  |
|----|-------------------------|--|
|    |                         | <p>the procedure to accept hidden works that have an impact on safety for the capital construction project</p> <p>Methods and means of the instrumentation quality control for the results of electrical installation work</p> <p>Operational quality control process flowcharts for electrical installation work</p> <p>Methods and means for remedying defects in the results of electrical installation work (using alternative work technologies, materials, and components)</p> <p>Procedure for drafting internal quality assurance reporting documentation for electrical installation work</p> <p>Technical specifications that govern doing and accepting electrical installation and pre-commissioning work</p> <p>Methods for organizing, and the technology used in performing, electrical installation work</p> <p>The features inherent in electrical installation work at hazardous, technically complex, and unique capital construction projects</p> <p>Labor protection and fire safety requirements when doing electrical installation work</p>   |
| 7. | Requirements for skills | <p>Control compliance with the production conditions outlined in the process flowcharts and regulations</p> <p>Perform visual and instrumental quality control of electrical work results</p> <p>Perform visual and instrumental element position control, structures, and parts of the capital construction project (buildings, infrastructure), and the utility systems</p> <p>Carry out a comparative compliance analysis of process control data on the results of electrical installation work with the requirements outlined in technical regulation and project documentation</p> <p>Identifying the reasons why the results of electrical installation work deviate from the requirements outlined in the regulatory, technology-related, and engineering specification documentation</p> <p>Provide documentary support of operational quality control results (operational quality control log, hidden works acts, and acceptance certificates)</p> <p>Carry out documentary support of acceptance control in the documents called for in the current quality control system at the organization (work logs, hidden works acts, and certificates of intermediate acceptance for responsible structures)</p> <p>Perform work with project cost estimate documentation (reading drawings, specifications)</p> <p>Provide and control documentary support of control results over the fulfillment of requirements, fire</p> |

|    |   |  |
|----|---|--|
|    |   | safety, and environmental protection requirements, and industrial safety requirements  |
| 8. | Requirements for the skills involved in the work mounting lighting systems and electrical equipment | <p>To check the project documentation's completeness and quality for lighting systems and electrical equipment</p> <p>Assess the conformity of technical information provided with the requirements outlined in technical regulation documentation</p> <p>To receive and check the completeness of the materials and equipment to do work mounting lighting networks and electrical equipment</p> <p>To check the conformity of cable markings and the cable cores with the design engineering drawings and technical regulation documentation</p> <p>Carry out the control of works execution installing power feed and distribution panels and boards, various kinds of electrical wiring, lighting fixtures, and lighting fixture fasteners.</p> <p>Control compliance with work technology for mounting lighting systems and installing electrical equipment</p> |

#### 6. The individual nomination: Electrical installation of Secondary switching

| Item No. | Name   | Contents   |
|----------|--|--|
| 2.       | Qualification criteria                               | A higher professional (technical) education, and period of employment in power engineering in engineering and technical positions for no fewer than 5 years. A higher education (not specialized) - a Bachelor's degree and complementary professional education - professional retraining programs in the appropriate field of activity.  |
| 3.       | Requirements for practical work experience           | No fewer than three years of specialized professional activity in the field of electrical engineering  |
| 4.       | Professional competences (professional requirements) | <p>Operational control of certain electrical installation processes and/or production operations</p> <p>Compliance control of the positions of the elements, structures, and parts of the capital construction project (buildings, infrastructure), and the utility systems, with the requirements outlined in technical and engineering specification documentation</p> <p>In-process quality control of electrical work results</p> <p>Identifying the reasons why the results of electrical installation work deviate from the requirements outlined in technical and engineering specification documentation</p> <p>Acceptance inspections on the finished types and stages of electrical installation work.</p> |
| 5.       | Requirements for the job functions                   | Execution control of how the measures are taken to ensure compliance on the part of the results of   |

|    |                                     |  |
|----|-------------------------------------|--|
|    |                                     | <p>electrical installation work with the requirements outlined in technical regulation documents, and with the conditions stipulated in construction contractor agreements</p> <p>Furnishing the results of electrical installation work and as-built technical documentation to those responsible for checking it</p> <p>Carry out compliance assessment of performance of production tasks and finishing works are executed</p> <p>Controlling the measures taken on the electrical installation work site to hold training sessions for the workers, and how they comply with labor protection, fire safety, and environmental protection requirements</p> <p>Executing various types of electrical installation work</p>   |
| 6. | Requirements in terms of knowledge: | <p>The requirements in process and project documentation for the scope and quality of doing electrical installation work at the capital construction project</p> <p>The requirements in the process and technology-related documentation for the scope and content of operations control over construction processes and/or production operations when doing electrical installation work</p> <p>The requirements in the process documentation for the procedure to accept hidden works that have an impact on safety for the capital construction project</p> <p>Methods and means of the instrumentation quality control for the results of electrical installation work</p> <p>Operational quality control process flowcharts for electrical installation work</p> <p>Methods and means for remedying defects in the results of electrical installation work (using alternative work technologies, materials, and components)</p> <p>Procedure for drafting internal quality assurance reporting documentation for electrical installation work</p> <p>Technical specifications that govern doing and accepting electrical installation and pre-commissioning work</p> <p>Methods for organizing, and the technology used in performing, electrical installation work</p> <p>The features inherent in electrical installation work at hazardous, technically complex, and unique capital construction projects</p> <p>Labor protection and fire safety requirements when doing electrical installation work</p> |
| 7. | Requirements for skills             | Control compliance with the production conditions outlined in the process flowcharts and regulations   |

|    |   |   |
|----|---|---|
|    |   | Perform visual and instrumental quality control of electrical work results  |
|    |   | Perform visual and instrumental element position control, structures, and parts of the capital construction project (buildings, infrastructure), and the utility systems  |
|    |   | Carry out a comparative compliance analysis of process control data on the results of electrical installation work with the requirements outlined in technical regulation and project documentation   |
|    |   | Identifying the reasons why the results of electrical installation work deviate from the requirements outlined in the regulatory, technology-related, and engineering specification documentation   |
|    |   | Provide documentary support of operational quality control results (operational quality control log, hidden works acts, and acceptance certificates)  |
|    |   | Carry out documentary support of acceptance control in the documents called for in the current quality control system at the organization (work logs, hidden works acts, and certificates of intermediate acceptance for responsible structures)  |
|    |   | Perform work with project cost estimate documentation (reading drawings, specifications)  |
|    |   | Provide and control documentary support of control results over the fulfillment of requirements, fire safety, and environmental protection requirements, and industrial safety requirements   |
| 8. | Requirements for the skills involved in secondary switching electrical installation | To check the project documentation's completeness and quality for the secondary switching circuits  |
|    |   | Assess the conformity of technical information provided with the requirements outlined in technical regulation documentation  |
|    |   | To receive and check the completeness of the materials and equipment to do work mounting secondary switching circuits   |
|    |   | To check the conformity of cable markings and the cable cores with the design engineering drawings and technical regulation documentation   |
|    |   | Carry out the control of works execution mounting wiring and cables, both in the switchgear in electrical machinery (panel boards, distribution panels, enclosures, switchgear cubicles) and to connect complete devices; controlling the installation of measurement devices, and protection and measurement hardware. |
|    |   | Control compliance with work technology for mounting lighting systems and installing electrical equipment   |
|    |   |   |

## 7. The team nomination: C&I equipment mounting

| Item No.   | Name   | Contents   |
|--|--|--|
| <b>1. Expert in the EC&amp;I Metal Worker competence</b> |  |  |
| 1.   | Qualification criteria                               | A higher professional (technical) education, and period of employment in power engineering (automation systems) in engineering and technical positions for no fewer than 5 years. A higher education - a Bachelor's degree Higher education (not specialized) - a Bachelor's degree and complementary professional education - professional retraining programs in the appropriate field of activity. Secondary vocational education - training program for mid-level specialists.   |
| 2.   | Requirements for practical work experience           | No fewer than three years of specialized professional activity in the field of electrical engineering (automation systems)   |
| 3.   | Professional competences (professional requirements) | <p>Operational control of certain electrical installation processes in automation systems and/or production operations</p> <p>Compliance control of the positions of the elements, structures, and parts of the capital construction project (buildings, infrastructure), and the utility systems, with the requirements outlined in technical and engineering specification documentation</p> <p>In-process quality control of results of electrical installation work in automation systems</p> <p>Identifying the reasons why the results of electrical installation work in automation systems deviate from the requirements outlined in technical and engineering specification documentation</p> <p>Acceptance inspections on the finished types and stages of electrical installation work in automation systems.</p>           |
| 8.   | Requirements for the job functions                   | <p>Execution control of how the measures are taken to ensure compliance on the part of the results of electrical installation work in automation systems with the requirements outlined in technical regulation documents, and with the conditions stipulated in construction contractor agreements</p> <p>Furnishing the results of electrical installation work in automation systems and as-built technical documentation to those responsible for checking it</p> <p>Carry out compliance assessment of performance of production tasks and finishing works are executed</p> <p>Controlling the measures taken on the work site for electrical installation in automation systems to hold training sessions for the workers, and how they comply with labor protection, fire safety, and environmental protection requirements</p> |



|   |                                     |   |
|---|-------------------------------------|---|
|   |                                     | Executing various types of electrical installation work in automation systems   |
| 13.   | Requirements in terms of knowledge: | The requirements in process and project documentation for the scope and quality of doing electrical installation work in automation systems at the capital construction project   |
|   |                                     | The requirements in the process and technology-related documentation for the scope and content of operations control over construction processes and/or production operations when doing electrical installation work in automation systems |
|   |                                     | The requirements in the process documentation for the procedure to accept hidden works that have an impact on safety for the capital construction project   |
|   |                                     | Methods and means of the instrumentation quality control for the results of electrical installation work in automation systems  |
|   |                                     | Operational quality control process flowcharts for electrical installation work in automation systems   |
|   |                                     | Methods and means for remedying defects in the results of electrical installation work in automation systems (using alternative work technologies, materials, and components)   |
|   |                                     | Procedure for drafting internal quality control reporting documentation for electrical installation work in automation systems  |
|   |                                     | Technical specifications that govern doing and accepting electrical installation and pre-commissioning work in automation systems   |
|   |                                     | Methods for organizing, and the technology used in performing, electrical installation work in automation systems   |
|   |                                     | The features inherent in electrical installation work in automation systems at hazardous, technically complex, and unique capital construction projects   |
|   |                                     | Labor protection and fire safety requirements when doing electrical installation work in automation systems   |
|   |                                     | 24.   |
| Perform visual and instrumental quality control of electrical work results in automation systems  |                                     |   |
| Perform visual and instrumental element position control, structures, and parts of the capital construction project (buildings, infrastructure), and the utility systems  |                                     |   |
| Carry out a comparative compliance analysis of process control data on the results of electrical installation work in automation systems with the requirements outlined in technical regulation and project documentation |                                     |   |

|  |  |  |
|--|--|--|
|  |  | Identifying the reasons why the results of electrical installation work in automation systems deviate from the requirements outlined in the regulatory, technology-related, and engineering specification documentation                          |
|  |  | Provide documentary support of operational quality control results (operational quality control log, hidden works acts, and acceptance certificates)   |
|  |  | Carry out documentary support of acceptance control in the documents called for in the current quality control system at the organization (work logs, hidden works acts, and certificates of intermediate acceptance for responsible structures) |
|  |  | Perform work with project cost estimate documentation (reading drawings, specifications)   |
|  |  | Provide and control documentary support of control results over the fulfillment of requirements, fire safety, and environmental protection requirements, and industrial safety requirements  |
| 33.  | Requirements for skills in the area of mounting sensing lines (piping line sections) in automation systems | To check the completeness and quality for how the project documentation is drafted for automation systems (sensing lines, piping line sections)  |
|  |  | Assess the conformity of technical information provided with the requirements outlined in technical regulation documentation   |
|  |  | To receive and check the completeness of the materials and equipment to do work in automation systems mounting sensing lines (piping line sections)  |
|  |  | To check the conformity of piping labeling with the design engineering drawings, process flowcharts, and technical regulation documentation  |
|  |  | Carry out the control of works execution for mounting sensing lines (piping line sections) in automation systems   |
|  |  | Control compliance with work technology used for work mounting sensing lines (piping line sections) in automation systems  |
| <b>2. Expert in the Argon Arc Welding competence</b> |  |  |
| 1.   | Qualification criteria   | Vocational education in “Welding production”, higher professional education in “Welding work equipment and technology” or “Welding and related processes”.   |
| 2.   | Requirements for practical work experience   | No fewer than three years of specialized professional activity in the field of welding production and related processes  |
| 3.   | Professional competences (professional requirements)   | Controlling the preparation and fitting work; Control of main and auxiliary welding consumables,   |

|     |                                     |   |
|-----|-------------------------------------|---|
|     |                                     | controlling the prepared edges to be welded, and the geometric dimensions of parts  |
|     |                                     | Controlling the succession of welding operations, welding work, control of welding modes, and control of the operation of the welding machine tools                                 |
|     |                                     | Technical inspection on work producing and installing the welded structures pursuant to the production technology documentation.  |
|     |                                     | Acceptance inspections on the finished types and stages of welding work.  |
|     |                                     | Controlling the preparation and fitting work; Control of main and auxiliary welding consumables, controlling the prepared edges to be welded, and the geometric dimensions of parts |
| 8.  | Requirements for the job functions  | Controlling the succession of welding operations, welding work, control of welding modes, and control of the operation of the welding machine tools                                 |
|     |                                     | Technical inspection on work producing and installing the welded structures pursuant to the production technology documentation.  |
|     |                                     | Controlling the preparation and fitting work; Control of main and auxiliary welding consumables, controlling the prepared edges to be welded, and the geometric dimensions of parts |
|     |                                     | Controlling the succession of welding operations, welding work, control of welding modes, and control of the operation of the welding machine tools                                 |
|     |                                     | The main types, structural components, and dimensions of welding joints, the symbol designations used for welding seams in drawings.  |
| 13. | Requirements in terms of knowledge: | The requirements outlined in production technology and regulatory documentation for welding.  |
|     |                                     | The rules and methods used to prepare the surfaces and edges on the products that are to be welded  |
|     |                                     | The allowable tolerances when preparing and fitting welding structures.   |
|     |                                     | Welding techniques and technology.  |
|     |                                     | The types of welding defects that exist, what causes them, the methods to prevent them, and the ways to remedy them.  |
|     |                                     | The purpose, arrangement, and procedure for using controls (measurement devices, equipment, optical instruments).   |
|     |                                     | Requirements for the quality of welding joints  |
|     |                                     | The types and methods of control used for fitted structures and welding seams that have been  |

|     |  |   |
|-----|--|---|
|     |  | prepared for welding.   |
|     |  | The methodology for visual inspections and instrumentation monitoring on welding joints   |
|     |  | The rules and standards for fire safety when welding work is being performed.   |
|     |  | Labor protection requirements for welding work.   |
| 24. | Requirements for skills                                  | The skill to apply production technology documentation for fitting and welding.   |
|     |  | Determine compliance on the part of the preparation work done on the components in the welded structure, and how they are fitted for welding, with the requirements in the production technology documentation. |
|     |  | Doing visual inspections and instrumentation monitoring on the external defects in welding seams, using measurement devices to establish the geometric dimensions of welding joints and structures.             |
|     |  | Detect violations of processes of execution of works  |
|     |  | Control the quality of parts preparation done on the sensing line (piping line section) parts, and the components in the structures to be welded  |
|     |  | Control the quality of parts assembly done on the sensing line (piping line section) parts, and the components in the structures to be welded   |
|     |  | Control execution quality on the tack welds for the sensing line (piping line section) components in accordance with the requirements in the production technology documentation (PTD).                         |
|     |  | Control execution quality for manual argon arc welding quality as per the requirements in the PTD.  |
| 32. | Requirements for skills in the area of argon arc welding | Control compliance with technology used for welding work (argon arc welding) on ending lines (piping line sections) in automation systems   |
|     |  | Vocational education in “Welding production”, higher professional education in “Welding work equipment and technology” or “Welding and related processes”   |
|     |  | No fewer than three years of specialized professional activity in the field of welding production and related processes   |
|     |  | Controlling the preparation and fitting work; Control of main and auxiliary welding consumables, controlling the prepared edges to be welded, and the geometric dimensions of parts                             |
|     |  | Controlling the succession of welding operations, welding work, control of welding modes, and control of the operation of the welding machine tools   |
|     |  | Technical inspection on work producing and  |

|  |  |   |
|--|--|---|
|  |  | installing the welded structures pursuant to the production technology documentation. |
|--|--|---|

### 8. The team nomination: Building Information Modeling and design

| Item No. | Name   | Contents  |
|----------|--|---|
| 1.       | General description of the competence        | <p>The competence is designed to determine the best teams that are capable of developing digital information models for capital construction projects with an established level of detail and attributes, as well as actualize the development of the capital construction project (CCP) in a digital format (a digital CCP).</p> <p>Specialists from organizations from EAEU countries (Armenia, Belarus, Kazakhstan, Kyrgyzstan, and Russia) that do project work using information modeling technologies are allowed to participate in the Championship.</p>   |
| 2.       | Requirements for qualifications / profession | <ol style="list-style-type: none"> <li>1. Higher education</li> <li>2. Position, if an employee is recruited for the purposes of participating in the Championship from a design or engineering organization, or a design engineering department (division): lead engineer, team leader, or deputy department director / department director in area of activity for the competitive nomination, or a similar position</li> <li>3. Position, if an employee is recruited for the purposes of participating in the Championship from a scientific or educational organization - junior research scientist / research scientist / senior research scientist or teacher / senior teacher / senior lecturer / professor or chair / department chair or director / deputy director at a scientific center, scientific education center, or laboratory</li> <li>4. Total period of employment - no fewer than 5 years</li> <li>5. Time period working in specialty - no fewer than 3 years</li> <li>6. Age: 25 years and older</li> </ol> |
| 3.       | Requirements in terms of knowledge:          | <p><i>A Jury Member must know:</i></p> <ul style="list-style-type: none"> <li>- the principles of ethical conduct</li> <li>- the algorithm used in digital information model development algorithm for the capital construction project;</li> <li>- the national and international legislative and regulatory acts in the area of information modeling and design work in construction</li> <li>- the national and international technical regulation documentation in the area of information modeling and design work in</li> </ul>   |

|    |                                |  |
|----|--------------------------------|--|
|    |                                | <p>construction</p> <ul style="list-style-type: none"> <li>- the methods used to design utility systems and infrastructure and building structures using information modeling technologies</li> <li>- the features inherent in the software to develop digital information models for capital construction projects</li> </ul>   |
| 4. | Requirements for skills        | <p><i>A Jury Member must know:</i></p> <ul style="list-style-type: none"> <li>- To assess the accuracy with adjusting and using software for information modeling</li> <li>- To assess the accuracy involved in using national and international technical regulation documentation in the area of information modeling and design</li> <li>- To assess the accuracy of the calculations made on the design object</li> <li>- To assess the correctness of the equipment and material selected to actualize the technical solutions in the context of using information modeling technologies</li> <li>- To assess the accuracy of the digital information model for the capital construction project (including using automated verification tools).</li> </ul> |
| 5. | Requirements for the functions | <p><i>A Jury Member must possess the necessary qualifications to perform the following functions:</i></p> <ul style="list-style-type: none"> <li>- Analyze the completeness and quality of digital information models</li> <li>- Analyze the completeness and quality of technological resource models</li> <li>- Analyze the completeness and quality of consolidated information models;</li> <li>- Analyze the completeness and quality of the digital project for organizing the construction process.</li> </ul>  |

### 9. The individual nomination: Building Information Modeling

| Item No. | Name                                  | Contents   |
|----------|---------------------------------------|--|
| 1.       | General description of the competence | <p>The competence is designed to identify the best BIM designers across different scopes (architectural solutions, design solutions, heating and ventilation, water supply and sewerage, electrical supply) that are capable of developing digital information models and summary capital construction project digital information models.</p> <p>Specialists from organizations from EAEU countries</p> |

|    |  |   |
|----|--|---|
|    |  | (Armenia, Belarus, Kazakhstan, Kyrgyzstan, and Russia) that do project work using information modeling technologies are allowed to participate in the Championship.   |
| 2. | Requirements for qualifications / profession | <p>7. Higher education</p> <p>8. Position, if an employee is recruited for the purposes of participating in the Championship from a design or engineering organization, or a design engineering department (division): lead engineer or group leader or deputy department director / department director in the area of activity for the competitive nomination, or a similar position</p> <p>9. Position, if an employee is recruited for the purposes of participating in the Championship from a scientific or educational organization - junior research scientist / research scientist / senior research scientist or teacher / senior teacher / senior lecturer / professor or chair / department chair or director / deputy director at a scientific center, scientific education center, or laboratory</p> <p>10. Total period of employment - no fewer than 5 years</p> <p>11. Time period working in specialty - no fewer than 3 years</p> <p>12. Age: 25 years and older</p> |
| 3. | Requirements in terms of knowledge:          | <p><i>A Jury Member must know:</i></p> <ul style="list-style-type: none"> <li>- the principles of ethical conduct</li> <li>- the algorithm used in digital information model development algorithm for the capital construction project;</li> <li>- the national and international legislative and regulatory acts in the area of information modeling and design work in construction</li> <li>- the national and international technical regulation documentation in the area of information modeling and design work in construction</li> <li>- the methods used to design utility systems and infrastructure and building structures using information modeling technologies</li> <li>- the features inherent in the software to develop digital information models for capital construction projects</li> </ul>  |
| 4. | Requirements for skills                      | <p><i>A Jury Member must know:</i></p> <ul style="list-style-type: none"> <li>- To assess the accuracy with adjusting and using software for information modeling</li> <li>- To assess the accuracy involved in using national and international technical regulation documentation in the area of information modeling and design</li> <li>- To assess the accuracy of the calculations</li> </ul>   |

|    |                                |  |
|----|--------------------------------|--|
|    |                                | <p>made on the design object</p> <ul style="list-style-type: none"> <li>- To assess the correctness of the equipment and material selected to actualize the technical solutions in the context of using information modeling technologies</li> <li>- To assess the accuracy of the digital information model for the capital construction project (including using automated verification tools).</li> </ul> |
| 5. | Requirements for the functions | <p>A <i>Jury Member</i> must possess the necessary qualifications to perform the following functions:</p> <ul style="list-style-type: none"> <li>- Analyze the completeness and quality of digital information models</li> <li>- Analyze the completeness and quality of consolidated information models.</li> </ul>   |

### 10. The individual nomination: Design of the architectural and construction part

| Item No. | Name   | Contents   |
|----------|--|--|
| 1.       | General description of the competence          | A specialist at an organization (organizational department) that designs and/or supervises the design of the architectural and construction part   |
| 2.       | Requirements for qualifications / profession   | <p>A specialist with a specialized higher (higher professional) education in the areas of training or specialties in industrial and civil construction, or with a higher education in non-specialized areas of training and specialties that have gone through professional retraining in industrial and civil construction.</p> <p>Work experience: no fewer than 3 years in positions linked to doing and/or organizing architectural construction design at an organization</p> |
| 3.       | Requirements for special permits and documents | Documents are required that validate the relevant education and level of qualification, and professional retraining (if that exists). No special permits are required  |
| 4.       | Requirements for the job functions             | Preparing and/or organizing how project documentation is prepared to build industrial facilities to provide to stakeholder organizations   |
| 5.       | Requirements for advanced training             | None established (given a higher specialized (higher professional) education in the areas of training or specialties in industrial and civil construction)   |
| 6.       | Requirements in terms of knowledge:            | <p><i>Must know how to:</i></p> <p>The legislative regulatory acts, technical regulations, and governing documents that regulate urban planning and development activities in EAEU member countries</p> <p>Legislative regulatory acts in the area of technical</p>  |



|    |                         |   |
|----|-------------------------|---|
|    |                         | <p>and fire safety in EAEU member countries</p> <p>The makeup, content, and requirements in the documentation about creating (reconstructing, repairing, functioning) the facilities involved in urban planning and development activities in EAEU countries</p> <p>The technologies used in construction work</p> <p>Construction materials, and their properties, that are used in the structures of industrial facilities</p> <p>Modern automation equipment used in the area of urban planning and development activities, including automated information systems</p> <p>Engineering drawings and construction draftsmanship, applied software (including the skills of using a PC using AutoCAD, SCAD software)</p> <p>The governing documents for developing and compiling the technical documentation in urban planning and development activities in EAEU member countries</p> <p>Cutting-edge experience in the area of building industrial facilities</p> <p>Labor protection requirements</p> <p>Sanitary rules and regulations</p> <p>National and international quality standards</p>   |
| 7. | Requirements for skills | <p><i>Must know how to:</i></p> <p>Find, analyze, and do research on information on facilities with engineered utility systems that is necessary to develop and draft the design-basis solutions;</p> <p>Develop solutions to put together engineered utility system project solutions for architectural and construction activities</p> <p>Prepare proposals on whether it is worthwhile to make adjustments to the design-basis solutions that have been adopted</p> <p>Use information and communication technologies in professional activities to do work on designing the utility systems for facilities during architecture and construction work</p> <p>To ensure that the facilities being erected comply with industry standards, and with the statement of work for doing the construction work;</p> <p>Use and provide the necessary information during communications in the context of professional activities on work on designing the utility systems for facilities during architecture and construction work</p> <p>To draft documentation to do work on designing the utility systems for facilities during architecture</p> |

|  |   |
|--|---|
|  | <p>and construction work in accordance with established requirements</p> <p>To receive and process information from various sources, analyze the information gained, pick out the main points, and to generate new knowledge using that</p> <p>Use regulatory and reference materials and instructions (including knowing how to work in the reference document systems Konsultant Plyus, Tekhekspert)</p> <p>Work with a computer and use specialize software (AutoCAD, MS Office)</p> |
|--|---|

### 11. The individual nomination: Design of electrical part and automation systems

| Item No. | Name   | Contents   |
|----------|--|--|
| 1.       | Requirements for qualifications / profession | <ul style="list-style-type: none"> <li>- Higher education</li> <li>- Position, if an employee is recruited for the purposes of participating in the Championship from a design organization or a design engineering department (division): lead engineer or group leader or deputy department director / department director in the area of activity for the competitive nomination, or a similar position</li> <li>- Total period of employment - no fewer than 5 years</li> <li>- Time period working in specialty - no fewer than 3 years</li> <li>- Age: 30 years and older</li> </ul>   |
| 2.       | Requirements in terms of knowledge:          | <p><i>A Jury Member must know:</i></p> <ul style="list-style-type: none"> <li>- the principles of ethical conduct</li> <li>- the algorithm for developing a project in the context of a capital construction project</li> <li>- the terminology for related sections in the project, the letter codes used for components in the plans and process flowcharts, and the rules for displaying objects (products, infrastructure, and their constituent components)</li> <li>- general information on the systems in related sections in the project, and on building structures</li> <li>- the procedure for transmitting and receiving baseline data</li> <li>- the general principles of how to apply regulatory and technical documentation, and legislative regulatory acts</li> <li>- general guidelines for the application of environmental laws</li> <li>- professional computer software to design</li> </ul> |

|    |                                |  |
|----|--------------------------------|--|
|    |                                | <p>electric lighting systems, power supply systems up to 1,000 V, low-current systems (fire suppression automated controls, alarm and warning systems) design of power supply systems up to 1,000 V (primary switching, relay protection and automation) and automating a building’s utility systems at capital construction projects</p> <ul style="list-style-type: none"> <li>- the general physical principles and physical methods to do calculations for systems</li> <li>- the general principles of operation for design engineers to work with related sections of project documentation</li> <li>- modern technical solutions in the area of creating electric lighting systems, power supply systems up to 1000 V, low-current systems (fire suppression automated controls, alarm and warning systems) design of power supply systems up to 1000 V (primary switching, relay protection and automation) and automating a building’s utility systems at capital construction projects</li> <li>- the general principles for determining technical and economic indicators.</li> </ul> |
| 3. | Requirements for skills        | <p><i>A Jury Member must know:</i></p> <ul style="list-style-type: none"> <li>- to evaluate the accuracy and completeness of electric lighting systems, power supply systems up to 1000 V, low-current systems (fire suppression automated controls, alarm and warning systems) design of power supply systems up to 1000 V (primary switching, relay protection and automation) and automating a building’s utility systems at capital construction projects</li> <li>- to evaluate the rationale for selecting equipment that matches the requirements outlined in the statement of work</li> <li>- to identify and analyze the advantages and disadvantages of design options, and assess the risks linked to actualizing the project</li> <li>- to use modern information and communication technologies to analyze the work done by those participating and preparing the final solutions.</li> </ul>   |
| 4. | Requirements for the functions | <p><i>A Jury Member must possess the necessary qualifications to perform the following functions:</i></p> <ul style="list-style-type: none"> <li>- to evaluate the accuracy and completeness of the project solutions for the electric lighting systems, power supply systems up to 1000 V, low-current systems (fire suppression automated controls, alarm and warning systems) design of power supply systems up to 1000 V (primary switching, relay protection and automation) and automating a building’s utility systems at capital construction projects</li> </ul>  |

|  |  |   |
|--|--|---|
|  |  | <ul style="list-style-type: none"> <li>- to analyze the results of the calculations done for the electric lighting systems, power supply systems up to 1000 V, low-current systems (fire suppression automated controls, alarm and warning systems) design of power supply systems up to 1000 V (primary switching, relay protection and automation) and automating a building's utility systems at capital construction projects.</li> </ul> |
|--|--|---|

## 12. The individual nomination: Design of process part

| Item No. | Name   | Contents  |
|----------|--|---|
| 1.       | Requirements for qualifications / profession | <ul style="list-style-type: none"> <li>- Higher education</li> <li>- Position, if an employee is recruited for the purposes of participating in the Championship from a design organization or a design engineering department (division): lead engineer or group leader or deputy department director / department director in the area of activity for the competitive nomination, or a similar position</li> <li>- Total period of employment - no fewer than 5 years</li> <li>- Time period working in specialty - no fewer than 3 years</li> <li>- Age: 30 years and older</li> </ul>  |
| 2.       | Requirements in terms of knowledge:          | <p><i>A Jury Member must know:</i></p> <ul style="list-style-type: none"> <li>- the principles of ethical conduct</li> <li>- the algorithm for developing a project in the context of a capital construction project</li> <li>- the terminology for related sections in the project, the letter codes used for components in the plans and process flowcharts, and the rules for displaying objects (products, infrastructure, and their constituent components)</li> <li>- general information on the systems in related sections in the project, and on building structures</li> <li>- the procedure for transmitting and receiving baseline data</li> <li>- the general principles of how to apply regulatory and technical documentation, and legislative regulatory acts</li> <li>- general guidelines for the application of environmental laws</li> <li>- professional computer software for designing and doing calculations on the systems and equipment selection for heat and gas supply, ventilation, and water supply and sewerage systems at capital construction projects</li> <li>- the general physical principles and physical</li> </ul> |

|    |                                |   |
|----|--------------------------------|---|
|    |                                | <p>methods to do calculations for systems</p> <ul style="list-style-type: none"> <li>- the general principles of operation for design engineers to work with related sections of project documentation</li> <li>- the modern technical solutions in the area of creating heat and gas supply, ventilation, and water supply and sewerage systems at capital construction projects</li> <li>- the general principles for determining technical and economic indicators.</li> </ul>   |
| 3. | Requirements for skills        | <p><i>A Jury Member must know:</i></p> <ul style="list-style-type: none"> <li>- to assess the accuracy and completeness of the calculations done on the heat and gas supply, ventilation, and water supply and sewerage systems at capital construction projects</li> <li>- to evaluate the rationale for selecting equipment that matches the requirements outlined in the statement of work</li> <li>- to identify and analyze the advantages and disadvantages of design options, and assess the risks linked to actualizing the project</li> <li>- to use modern information and communication technologies to analyze the work done by those participating and preparing the final solutions.</li> </ul> |
| 4. | Requirements for the functions | <p><i>A Jury Member must possess the necessary qualifications to perform the following functions:</i></p> <ul style="list-style-type: none"> <li>- to assess the accuracy and completeness of the project systems for the heat and gas supply, ventilation, and water supply and sewerage systems at capital construction projects</li> <li>- to analyze the results of the calculations done on the heat and gas supply, ventilation, and water supply and sewerage systems at capital construction projects</li> </ul>  |

### 13. The team nomination: Geodetic engineer

| No | Name  | Contents   |
|----|---|--|
|    | Level of education  | Secondary professional education   |
| 1. | Education documentation   | Diploma attesting to higher professional education for the specialties: applied geodesy, land utilization, aerial photogeodesy, mining geodesy, cartography, and aerial imaging in the area of construction and urban planning.      |
| 2. | Period of employment (total in the area of industrial construction) | Period of employment in the relevant type (types) of professional activity no fewer than 7 years in an engineering position (department manager, division manager, department supervisor of integrated engineering surveying work or |

| No. | Name   | Contents   |
|-----|--|--|
|     |  | department supervisor of certain type of engineering surveying work, department supervisor for Chief Project Engineer, department chief expert of the department of the Chief Project Engineer, department chief expert with department of Chief Project Engineer, building inspection department director (technical supervision), main specialist in building inspection department, etc.) |
| 3.  | Complementary professional education (refresher course)  | Complementary professional education - professional development programs in the field of professional expertise  |
| 4.  | Work functions   | Activities in the field of engineering surveys, engineering and technical design, construction project management, building inspection and supervision, providing technical advice in these areas, examining the results of engineering surveys  |
| 5.  | Experience with participating as an expert in professional skill contests (intra-corporate, industry, national, regional, European, international) | Experience participating in professional skill competitions as an expert is preferable (member of competition committee, jury) in the nomination's competences.  |
| 6.  | <i>Additionally:</i>   | Scientific and teaching titles, ranks<br>To be included as part of other expert committees for the competence  |
| 7.  | Certification in the requirements put forth by the regulatory authorities (in the areas of focus for the competences)                              | This is not a mandatory requirement for the nomination's competences   |

#### 14. The individual nomination: Pricing and estimating standardization

| No. | Name                                   | Contents  |
|-----|--|---|
| 1.  | Nomination Name                        | Price formation and cost estimate standardization   |
| 2.  | Requirements for the occupied position | - Director (supervisor) of a department (department, service, section, group) for price formation and cost estimate standardization (developing cost estimate documentation)  |
| 3.  | Requirements for education             | - Higher technical (construction specialties) or an economic education - Bachelor's programs, Specialist degree programs, Master's degree programs;<br>- Complementary professional education - professional development programs<br>- If there is a non-industry-specific higher education, the obligatory requirement is complementary professional education - |

|    |                                    |   |
|----|------------------------------------|---|
|    |                                    | professional retraining program in the field of professional expertise  |
| 4. | Requirements for work experience   | No fewer than five years of specialized professional activity<br>Experience of no less than one year in management positions for specialized professional activity  |
| 5. | Requirements for the job functions | <ul style="list-style-type: none"> <li>- Developing the cost estimate policy for an organization</li> <li>- Checking the rationale underlying the cost of construction and installation work, and other expenses for a general contractor, that are contained in bidding documentation or proposals submitted for construction contracts to build a project, taking into account possible price hikes during the construction period stemming from inflation, or scientific and social progress, and expenses for environmental protection measures</li> <li>- Participating in the preparation and approval of construction contracts to build a project</li> <li>- Organizing how proposals are put together and justified for a contract's start price when bidding is going on for orders from the construction industry</li> <li>- Checking the cost estimate documentation submitted by the customer, and preparing an opinion on its makeup and quality</li> <li>- Together with representatives from subcontractor organizations, securing approval from the customer and project organization for the local cost estimates, individual estimated resource averages and estimates for construction and installation work, calculating the estimated cost for material resources, the cost of a vehicle hour for operating construction machinery (including new, highly-efficient, imported machines), the individual averages for overhead costs in estimated profit, the calculations for the cost of work and expenses spelled out in consolidated estimated cost calculations on the cost of construction</li> <li>- Calculating the cost of construction, including for its discrete constituent components</li> <li>- Participating in choosing the most optimal arrangement to calculate work done between the customer and contractor,</li> </ul> |

|    |                                     |   |
|----|-------------------------------------|---|
|    |                                     | <p>accounting for work done by the customer and control measurements for construction and installation work already done</p> <ul style="list-style-type: none"> <li>- Setting up how cost estimates are done for additional types of work, whose expenses are not covered in the relevant standards, and securing approval from the customer and project organization for those</li> <li>- Participating in preparing drafts of contracts for the delivery of material resources with their suppliers (producers, intermediaries); in approving changes in the conditions on the issues involved in price formation for signed delivery contracts; in preparing the necessary documentation for reviewing claims filed in arbitration court; in forming, updating, and storing data on the indicators for expenses and the cost of resources (manpower expenses for construction workers, the time worked by construction machinery, the need for materials, goods, and structures) at projects built by contractor organizations that are necessary to create corporate constituent and aggregated cost averages and estimates; in preparing data necessary for a government acceptance committee to issue an act to commission a facility.</li> </ul> |
| 6. | Requirements in terms of knowledge: | <ul style="list-style-type: none"> <li>- Legislative and regulatory acts and laws in the are of urban planning and development</li> <li>- The standards and methods, and procedural documents that relate to price formation and construction cost estimate standardization</li> <li>- The construction rules and regulations, government and industry standards</li> <li>- The process of organizing and developing the project documentation, and the procedure to secure preliminary approval, and subsequent approval, for a construction project</li> <li>- The principles for technological and architectural design of infrastructure and buildings</li> <li>- Modern building structures and materials</li> <li>- The technologies used in construction work</li> <li>- The rules for signing construction contracts and government contracts to do construction work</li> <li>- All aspects that have to do with organizing</li> </ul>   |



|    |                         |   |
|----|-------------------------|---|
|    |                         | <p>construction work</p> <ul style="list-style-type: none"> <li>- The features inherent in, and the financing procedure for, construction work; the principles of taxation in the construction industry</li> <li>- The requirements for organizing work when building industrial-purpose facilities</li> <li>- the construction rules and regulations that apply to the area of industrial construction</li> <li>- The procedure for going through expert review on the project cost estimate documentation, and checking the accuracy with determining the estimated costs for construction work at industrial facilities.</li> </ul>  |
| 7. | Requirements for skills | <ul style="list-style-type: none"> <li>- Searching for updated legislative, procedural, and regulatory documentation on determining the estimated costs of construction</li> <li>- Analyzing the conditions for doing construction, reconstruction, and capital repair work that are necessary to put together cost estimate calculations</li> <li>- The correct use of necessary technical and regulatory documentation that govern the issues involved in construction price formation and cost estimate standardization</li> <li>- The well-founded choice of methods and ways to determine construction cost estimate documentation</li> <li>- Developing various types of cost estimate calculations as per established procedures</li> <li>- Drafting and putting together cost estimate documentation as per established procedures</li> <li>- Assessing the accuracy with determining the cost estimates for construction, capital repair, and reconstruction projects for industrial facilities</li> <li>- Analyzing the technical documentation and using it when preparing baseline data to determine the cost estimates</li> <li>- Calculating the cost estimates for all types of resources and equipment as per established procedures</li> <li>- Knowing how to use modern organizational and communication equipment to electronically transmit, protect, and store information</li> <li>- Using updated office programs at the level of a proficient user</li> <li>- Proficiently using updated special-purpose</li> </ul> |

|  |  |  |
|--|--|--|
|  |  | cost estimate programs<br>- Possessing the skills to work with special-purpose software to do work with project documentation (CAD-systems). |
|--|--|--|

Report form sheet to select the Jury Chairman

PROTOCOL No. \_\_\_\_\_  
to select the Jury Chairman for the nomination \_\_\_\_\_

Heard by: experts for the nomination \_\_\_\_\_ (name of company) \_\_\_\_\_ (full name) for proposals to elect the Jury Chairman from among the following people who are Jury Experts: \_\_\_\_\_ (full name).

Do hereby resolve:

1. To ratify the following candidates for voting on the issue of electing the Jury Chairman for the nomination \_\_\_\_\_ (name of company):
  - 1.1. \_\_\_\_\_ (full name)
  - 1.2. \_\_\_\_\_ (full name)
  - 1.X. \_\_\_\_\_ (full name)
  
2. To ratify the results of voting on the candidates for the Jury Chairman for the nomination \_\_\_\_\_ (name of company)
  - 2.1. \_\_\_\_\_ (full name)  
“for” - \_\_\_ people “against” - \_\_\_ people, “abstained” - \_\_\_ people
  
  - 2.2. \_\_\_\_\_ (full name)  
“for” - \_\_\_ people “against” - \_\_\_ people, “abstained” - \_\_\_ people
  
  - 2.X. \_\_\_\_\_ (full name)  
“for” - \_\_\_ people “against” - \_\_\_ people, “abstained” - \_\_\_ people
  
3. To ratify the Jury Chairman for the nomination \_\_\_\_\_ (name of the company): \_\_\_\_\_ (full name) with the results of the voting “for” - \_\_\_ people “against” - \_\_\_ people, “abstained” - \_\_\_ people

Jury Member \_\_\_\_\_  
(signature, full name)

Jury Member \_\_\_\_\_  
(signature, full name)

.....

Jury Member \_\_\_\_\_  
(signature, full name)