



“Perseverance for Excellence”

Terms of Reference (ToR) for the positions on contract for Hydro Mechanical Works

2023



The Terms of Reference (ToR) for manpower requirement on contract for the hydro mechanical works of Druk Hydro Energy Limited (DHyE) is formalized for reference and intended to provide clarity to interested applicants and candidates.

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Welder

1. Understand & interpret technical drawings and specifications to determine the appropriate welding techniques and materials for fabrication.
2. Operate manual or semi-automatic welding equipment to fuse metal segments together
3. Measure and mark work pieces using straightedges, templates, or other measuring devices to ensure accuracy and precision.
4. Inspect completed welds to ensure they meet company and industry standards for strength, quality, and safety
5. Operate other tools and equipment, such as grinders or saws, to prepare metal surfaces or remove excess welds.
6. Ensure safety standards at worksite such as the use of PPEs.
7. Perform any other job assigned by the Project Engineer/Supervisor

REQUIREMENTS

- Welders qualification certificate is a must
- Proficient in a variety of welding techniques, including TIG, MIG, SAW and SMAW.
- Experience working with carbon steel, stainless steel, and aluminium
- Ability to read and interpret technical drawings and schematics

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Mechanical Helper

1. Perform tasks of strenuous manual labor of moving heavy objects and job components.
2. Load and unload materials and objects in trucks & trailers. Boxing and unboxing of materials at the site of manufacturing.
3. Assist in the fabrication of the job components including cutting, marking and assembling materials and job components.
4. Load and unload materials from trucks, and move materials to and from work areas.
5. Keep work areas clean and free of debris, and maintain tools and equipment in good conditions.
6. Follow safety protocols and wear appropriate safety equipment at all times
8. Perform any other job assigned by the Project Engineer/Supervisor

REQUIREMENTS

- Familiarity with common hand and power tools
- Good communication and teamwork skills
- Willingness to learn and take direction from supervisors
- Knowledge of basic safety protocols
- Ability to lift heavy objects and work in physically demanding workplace

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Fabrication Fitter

1. Interpret technical drawings and specifications to determine the appropriate materials and procedures for fabrication process.
2. Cut and shape materials using hand and power tools to fit specifications
3. Measure and mark materials for cutting, drilling, or welding.
4. Assemble and fit components according to technical drawings and specifications
5. Weld or braze components together as required
6. Perform quality checks on completed work to ensure accuracy and precision.
7. Perform any other job assigned by the Project Engineer/Supervisor

REQUIREMENTS

- Ability to fabricate and carryout fitting works in a fabrication environment.
- Strong understanding of technical drawings & specifications.
- Proficient in the use of hand and power tools, including welding equipment.
- Know welding, brazing, and soldering techniques.

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Section Officer (Supervisor)

1. Oversee the production process and ensure that the production targets are met and that quality standards are maintained.
2. Supervise the work of production line workers/shift and ensure that workers adhere to the production schedules and safety protocols.
3. Ensure that all production equipment and tools of the fabrication process/production are properly maintained and in working order at all time.
4. Report and provide to his/her Supervisor on the updates on production progress and issues
5. Ensure that the production, fabrication and installation works runs smoothly and efficiently at the site.
6. Perform quality checks on completed work to ensure accuracy and precision.
7. Prepare daily work plan of the fabrication works, set targets and ensure progress are achieved as per target.
8. Perform any other job assigned by the Project Engineer

REQUIREMENTS

- Should be a good coordinator and effective manager.
- Should possess good communication skills and strong conflict management skills
- Strong understanding of technical drawings, specifications.
- Knowledge of welding, brazing, and soldering techniques.
- Should possess good leadership quality

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Deputy Executive Engineer

1. Create and maintain engineering drawings and documentation for the fabrication scope of works. Oversee the entire production process of the manufacturing works.
2. Collaborate with other Technicians and Operators to ensure the efficient and effective fabrication of the job components.
3. Monitor the production process to ensure that quality standards are being met and that the process of manufacturing is cost-effective.
4. Troubleshoot and resolve any issues that arise during the manufacturing/fabrication process.
5. Collaborate with Quality team to carry out tests and analyses on job components to ensure that they meet manufacturing and quality standards.
6. Ensure compliance with safety regulations and best practices during the manufacturing/fabrication process.
7. Review, monitor and regulate project/work progress for Monthly Production Incentive (MPI)
8. Perform any other job assigned by the Project Director/Project Management

REQUIREMENTS

- Strong knowledge of mechanical design principles
- Proficiency in CAD software, such as SolidWorks or AutoCAD etc.
- Familiarity with industry standards and regulations related to hydro mechanical component fabrication.
- Excellent problem-solving skills and ability to troubleshoot issues that arise during the fabrication process.
- Should be a good coordinator and effective manager.
- Should possess good communication skills and strong conflict management skills
- Strong understanding of technical drawings, specifications.
- Knowledge of welding, brazing, and soldering techniques.

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Grinder

1. Operate grinding and smoothing machines to shape and finish fabrication jobs of hydro mechanical components.
2. Read and interpret engineering drawings and documentation to ensure that job components are fabricated correctly.
3. Maintain and repair grinding and smoothing equipment as needed.
4. Carryout grinding and finishing process to ensure that accurate work output are met during the fabrication process.
5. Operate other tools and equipment, such as grinders or saws, to prepare metal surfaces or remove excess welds.
6. Perform any other job assigned by the Project Engineer/Supervisor

REQUIREMENTS

- Experience operating grinding and smoothing machines in a manufacturing environment.
- Ability to read and interpret engineering drawings and documentation.
- Strong attention to detail and ability to maintain accurate records throughout the fabrication process.
- Ability to troubleshoot and resolve issues that arise during the grinding and finishing process.
- Knowledge of safety protocols and best practices for working with grinding and smoothing equipment.

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Crane Operator

1. Operate a crane to move and position fabrication jobs and components during the fabrication process.
2. Work closely with Operators and other technicians to ensure that components and loads are moved safely and efficiently.
3. Follow safety protocols and best practices to prevent accidents and injuries at the manufacturing / work site.
4. Perform periodic and routine maintenance on the crane & lifting equipment to ensure that it is in good working order at all times.
5. Document the movement of jobs and components to ensure that accurate records are maintained throughout the fabrication process.
6. Ensure that all loads are properly secured and balanced before moving them with the crane.
7. Perform any other job assigned by the Project Engineer/Supervisor

REQUIREMENTS

- Certification as a crane operator or relevant experience operating cranes Familiarity with safety protocols and best practices for operating cranes.
- Strong attention to detail and ability to maintain accurate records throughout the fabrication process
- Strong physical stamina and manual handiness to operate the crane for extended periods and hours.
- Ability to troubleshoot and resolve issue that arise with the crane during operation

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NDT Inspector

1. Perform non-destructive testing on the job components such as the penstock ferrules and gates to ensure their structural integrity and safety.
2. Use a variety of NDT techniques, including ultrasonic testing, radiographic testing, magnetic particle testing, and dye penetrant testing, to identify any defects or flaws in the finished job products.
3. Document the results of NDT tests to ensure that accurate records are maintained throughout the fabrication process.
4. Troubleshoot and resolve any issues that arise during the NDT process.
5. Follow safety protocols and best practices to prevent accidents and injuries in the workplace.
6. Maintain and calibrate NDT equipment as required by the standard and specifications.
7. Perform any other job assigned by the Project Engineer/Director

REQUIREMENTS

- Certification as an NDT technician or relevant experience performing NDT Sound knowledge of the variety of NDT techniques, including ultrasonic testing, radiographic testing, magnetic particle testing, and dye penetrant testing.
- Ability to read and interpret engineering drawings and documentation.
- Strong attention to detail and ability to maintain accurate records throughout the fabrication process.
- Strong problem-solving and troubleshooting skills to identify and resolve issues with the NDT process.

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Painter

1. Preparing and painting of hydro mechanical components to meet industry standards.
2. Ensure that job components are properly coated and protected against corrosion and other forms of damage.
3. Prepare penstock ferrules for painting by cleaning, sanding, and masking them as needed.
4. Mix and apply paint or other coatings to the job components using a variety of tools, including brushes, rollers, and spray guns.
5. Follow safety protocols and best practices to prevent accidents and injuries at the workplace.
6. Document the painting process to ensure that accurate records are maintained throughout the fabrication process.
7. Collaborate with other painters and technicians to ensure that job components are painted to the appropriate colour and finish.
8. Troubleshoot and resolve any issues that arise with the painting process.
9. Perform any other job assigned by the Project Engineer/Supervisor

REQUIREMENTS

- Certification as a painter or relevant experience painting in a manufacturing environment.
- Familiarity with a variety of painting techniques and equipment, including brushes, rollers, and spray guns.
- Knowledge of different types of paint and coatings and their properties.
- Strong problem-solving and troubleshooting skills to identify and resolve issues with the painting process.

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Driver

1. Report to the Motor Transport Officer (MTO)/Project Director
2. Perform driving related duties of various officials of the Project.
3. Ensure timely and proper care, repair and maintenance of the vehicle including timely renewal of their documents.
4. Responsible for maintaining the fuel efficiency limit as prescribed for the Vehicle.
5. Report any damages of the vehicle to the Motor Transport Officer.
6. Responsible for timely delivery of official assignments to offices concerned.
7. Maintenance of Log-Book on a daily basis.
8. Proper Maintenance of Vehicle and maintain the vehicle in a running condition all the time.
9. Any other works assigned from time to time by MTO & Project Management.

REQUIREMENTS

- Must hold and possess valid driving license for the position and category of the vehicle designated.
- Should have very good driving skills including a sound knowledge on traffic related rules and regulations of the country.
- Must possess sound knowledge and able to carry out maintenance of vehicles.