

**Application for Qualification of a Plant (or company)**  
**(indicate the name and address)**  
**for Manufacturing<sup>1</sup> , Repair and Assembly<sup>1</sup> of Steel Bridge Structures**

*You are kindly requested to prepare your application on the following topics given below.  
In the case of submitting the application for Manufacturing and Repair and Assembly,  
and occurrence of the separate equipment and human resources for these activities,  
please in the particular topics indicate purpose of these resources with letters:  
M - Manufacturing, A - Repair and Assembly.*

1. General plant (or company) characteristics (indicate the characteristics of structures which are produced in the plant, the valid annual production programme (tons), along with a specification of structure types, for example: bridge structures, trusses, solid structures, footpath bridges etc.).
2. Manufacturing area of the plant (company), including the roofed area (indicate the address), with determination of main dimensions and crane capacity specifications.
3. Characteristics of the technical equipment of the plant (company): compression rooms, acetylene, oxygen and CO<sub>2</sub> gasification station, electricity, handling equipment.
4. Basic machine and mechanical and installation equipment of the plant (company); indicate characteristics and the quantity.
  - 4.1. Cutting machines: saws, guillotine shears, general purpose shear,
  - 4.2. Plastic processing machines: straightening rolling mills, winding up sheet rolling mills, bending brakes, bending devices with rollers for profiles, presses, hydraulic press, pneumatic forging hammers.
  - 4.3. Machining equipment: pillar drills, multiradial drilling machines, portable power drills, drill press, drill lathe, millers, planers, lathes.
  - 4.4. Other machines and equipment or instrumentation used for steel structure manufacturing.
5. The size of mould loft (length, width and its instrumentation).
6. Welding appliances.
  - 6.1. The quantity and the kind of appliances for oxygen cutting and pre-welding edge preparation.
  - 6.2. The quantity and the kind of appliances for grooving.
  - 6.3. The quantity and the kind of appliances for hand welding.
  - 6.4. The quantity of semi-automatic welding machines for gas shield welding (CO<sub>2</sub>, argon).
  - 6.5. The quantity and the kind of automatic welding machines.
  - 6.6. The quantity and the kind of appliances and tools for welded joint treatment
  - 6.7. The quantity and the kind of auxiliary appliances for cutting and welding: manipulators, positioners, etc.
  - 6.8. Electrode drying appliances (stand).

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<sup>1</sup> Delete as appropriate

7. The plant's (company's) equipment for anti-corrosion protection of manufactured structures.
8. General characteristics of inner transport conditions (the access and the distance from the shop to the railway siding, transport facilities for heavy and bulky elements in your Plant, the maximum length of element allowed for transportation, loading of brand new elements shipment onto road and rail means of transport).
9. The organisation and equipment of the company laboratory in the scope of control and measurement instrumentation (give the precise characteristics of it)
  - 9.1. Strength testing machines.
  - 9.2. X-ray, isotopic and ultrasound devices.
  - 9.3. Chemical laboratory equipment.
  - 9.4. Metallurgical laboratory equipment.
  - 9.5. Measurement chamber equipment.
  - 9.6. Other control and measurement devices.
10. The course of technological process of steel bridge structure manufacturing and the quality control system.
  - 10.1. The plant's (company's) organizational chart.
  - 10.2. Production preparation
    - technical documentation - receiving, analysis and verification - the responsible person, the way of approving and introducing changes to technical documentation.
    - technological documentation, scope of reports,
    - preparation of material specifications for metallurgic, welding, jointing and paintings materials ordering procedure,
    - the procedure for ordering and accomplishment of material orders.
  - 10.3. Information about plant (company) design office, the scope of activity.
  - 10.4. The process of manufacturing, organization, the applied technology.
    - collecting materials for manufacturing,
    - material preparation - lofting and cutting,
    - assembling and tack welding of elements,
    - welding of elements, welding methods - the scope of hand welding, CO<sub>2</sub> shield welding, hidden arc welding (express in %). Welding sequence, welding positions used,
    - technology of protection and removal of welding deformations,
    - assembly joint preparation,
    - the structure trial assembly - it's method and range, introduction of structural elevation (hogging), local conditions of shop assembly, the length and width of the plant assembly site,
    - technology of anticorrosion protection,
    - delivery of structure elements.
  - 10.5. High strength steel structure welding technology.
  - 10.6. Bridge bearing manufacturing.
    - design and process documentation,
    - model performance,
    - the procedure for ordering and collecting moulds,
    - bearings treatment,

- completing.

10.7. Quality control.

- quality assurance system, Quality Register, quality control organization,
- the control of metallurgical, welding and fixing materials. Acceptance documentation: certificates, material identification, marking of materials.
- Inter-operational control in individual phases of execution, with particular emphasis on the quality of welded joints,
- methods of butt weld inspection (Rtg and isotopes, ultrasound), fillet weld inspection, qualification of welds according to valid standards,
- measurements of components and the entire structure during the test assembly,
- internal acceptance of the structure,
- preparation and completion of acceptance documents for the structure, i.e. certificates for metallurgical and auxiliary materials, structure measurement sheets, radiograms and radiographic inspection certificates for butt welds, protocols.

10.8. Internal instructions for technology and quality control, national standard collecting and application.

11. Qualification of technical supervision staff.

11.1. Number of employees with higher technical education (engineer, master of science) in the following specialisations:

- bridge engineering .....
  - mechanics .....
  - welding technology .....
  - others .....
- total .....

11.2. Employee responsible for all technical and technological preparation of the structure, chief engineer (give name and surname, education, number of years of professional experience, qualifications and licenses)

11.3. Employee responsible for all welding works, chief welder or Head of the Welding Technology Section (give name and surname, education, number of years of professional experience, qualifications and licenses)

11.4. Names and qualifications of the persons preparing process documentation.

11.5. Names and qualifications of the persons preparing welding map documentation.

11.6. Persons directly responsible for the manufacturing process:

- chief of production,
- chief of production department,
- foremen.

11.7. Persons responsible for quality control.

- chief of quality control department,
- inspectors, in particular those responsible for welding works, give the number of quality control inspectors.

12. Qualifications of welders (give the number of adequate workers).

12.1. Number of electrical welders in general,

12.2. Number of specialised electrical welders (indicate specializations).

12.3. Number of basic electrical welders,

12.4. Number of semi-automatic machine welders (CO<sub>2</sub>),

- 12.5. Number of automatic machine welders (hidden arc),  
 12 6. Welders qualification process (in your plant), procedures, standards applied, regulations and instructions. Register and personal files of welders.
13. The practise and experience in structure execution. Give some examples if available.
14. The programme of technical and technological progress at your plant (company), development intentions, investments.
15. Certificates held: Government Supervision, SLV (Schweißtechnische Lehr- und Versuchsanstalt), TÜV CERT, Ship Register etc.
16. Detailed specification of the scope of application of the plant (company) applying for qualification for manufacturing, repair and assembly of steel bridge structures<sup>2</sup>:
- Railway, road, rail and road structures, footbridges;
  - Structures with span up to: 21 m, 40 m, unlimited;
  - Structures in terms of static systems: free supported, continuous, frame, plate, arched, etc.;
  - Structures in terms of girder type: full-walled, truss;
  - Structures of structural steel, ordinary, high-strength or special;
  - Structures in terms of plate thickness: .....
  - Structures in terms of connections types: welded, riveted, welded and riveted, with reamer bolts, with compression bolts.
  - In terms of welding methods: manually, semi-automatically and automatically in protective gas shields and under flux;
  - In terms of prefabricated element weight up to: .....
  - Bridge equipment elements such as: bearings, expansion joints, handrails, stairs, etc.
17. Other remarks and applications of the plant (company) applying for qualification for bridge steel structure performance.

Place, date

Deputy Technical Director  
 of the Applicant

Director  
 of the Applicant

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<sup>2</sup> Delete or fill in as appropriate