TEHNOROS

MATERIALS HANDLING EQUIPMENT

Bridge crane

Questionnaire

Technical specifications

1.	Type of crane in structure	Bridge single-girder crane ○
		Bridge double-girder crane ○
		Bridge four-girder crane ○
2.	Crane group	Special bridge crane with magnets ○
		Special bridge crane with a grab ○
		Special bridge crane with magnets and a grab ○
		Special bridge crane with magnets and a mold ○
		Special bridge crane with a grab and a mold ○
		Special bridge crane with a flexible traverse suspension ○
		Special bridge crane with a rigid traverse suspension ○
		Special bridge crane with a flexible traverse suspension and a rotatable trolley ○
		Special bridge crane with a rigid traverse suspension and a rotatable trolley ○
		Special bridge crane with two trolleys ○

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	Metallurgical casting bridge crane	○
	Metallurgical mold charging bridge crane	○
	Metallurgical forge bridge crane	○
	Other	

3. Using of crane and crane's mechanisms

3.1	Type of drive	Electrical

3.2 Estimated qualification groups of the crane and its mechanisms according to ISO 4301-1

3.2.1	Crane in general (A3-A8)	**A**
3.2.2	Main crane hoist (M1-M8)	**M**
3.2.3	Auxiliary crane hoist (M1-M8)	**M**
3.2.4	Trolley travel mechanism (M1-M8)	**M**
3.2.5	Trolley rotating mechanism/load-handling device (jaws, hook etc.) (M1-M8)	**M**
3.2.6	Crane travel mechanism (M1-M8)	**M**
3.2.7	Other groups:	**M**
3.3	**Lifting capacity, t** with removable load-handling device	
	with stationary load-handling device (hook, etc.)	
	of ropes	
	of trolley	
	other:	
	other:	
3.4	**Crane span, m**	
3.5	**Lifting height, m**	
3.6	**Crane size along its way** (with uncompressed buffers)**, m**	**Offered by the manufacturer**
3.7	**Load-handling device rotation:** Not provided	○
	Together with a load-handling device rotating mechanism	○
	Together with rotating trolley	○

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3.8	**Rotating angle limitations : hook/trolley/traverse/spreader/other:**		
3.8.1	Full-turn/Non-full-turn (±90° / ±180° / ±270° / ±370°)		
3.9	**Mechanisms speed**		
3.9.1	Main crane hoist, m/sec (m/min)	**V=**	
3.9.2	Auxiliary crane hoist, m/sec (m/min)	**V=**	
3.9.3	Trolley traveling mechanism, m/sec (m/min)	**V=**	
3.9.4	Trolley/load-handling device (hook, traverse, spreader, etc.) rotating mechanism, rpm	**V=**	
3.9.5	Crane travel, m/sec (m/min)	**V=**	
3.9.6	Other:	**V=**	
3.10	**Height from the rail head level**		
3.10.1	Of load lifting, m		
3.10.2	Of load lowering, m		
3.11	**Distance from rail head level up to lower truss elements** (for indoor cranes and cranes located under the roof)**, m**		
3.12	**Distance from rail head level axis up to pillars and other crane travelling way elements, m**		
3.13	**Crane rail type**		
3.14	**Permissible wheel load, kN (t)**		
4	**Operating conditions**		
4.1	**Operating temperature range, °C**	**from**	**up to**
4.2	**Placement category:** (outdoor – «1», under the roof – «2», not heating zone – «3», heating zone – «4», high humidity zone – «5»)		
4.3	**Wind load**		
4.3.1	Maximum wind speed In crane operation mode, m/sec	**V=**	
	Out of use, m/sec	**V=**	

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4.4	**Seismic resistance, (Richter scale)**	**up to**	
4.5	**Dustiness level** (in case of increased dustiness)**:**		
4.5.1	Type of the dust (material)		
4.5.2	Density, mg/m³		
4.6	**Heatstroke possibilities**		
4.6.1	Source (no source / load / furnace etc.)		
4.6.2	Main impact on (suspension/travers/bridge girder/ trolley, etc.))		
4.6.3	Temperature, °C	from	up to
4.6.4	Duration, min	from	up to
4.7	**Other special conditions**		

5 Crane purpose

5.1	**Load handling:** Bulk load, specify:	
	General cargoes, specify:	
5.2	**Execution of technological operations:**	

	Warehouse maintenance	☐	**Freight transport loading**	☐
	Freight train loading	☐	**Furnace loading**	☐
	Continuous casting machines maintenance	☐	**Rolling mill maintenance**	☐
	Assembly operations	☐	**Other:**	

6 Load characteristics

6.1.1	**General cargoes or load package of the 1st type**			
6.1.1.1	Maximum weight on a load-handling device, t			
6.1.1.2	Maximum dimensions, mm	length	width (diameter)	height (depth)

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6.1.1.3	Availability of special slinging points: :		yes ◯	no ◯
6.1.1.4	Load temperature, °C		from	up to
6.1.1.5	Other:			
6.1.2	**General cargo or load package of the 2nd type**			
6.1.2.1	Maximum weight on a load-handling device, t			
6.1.2.2	Maximum dimensions, mm	length	width (diameter)	height (depth)
6.1.2.3	Availability of special slinging points		yes ◯	no ◯
6.1.2.4	Load temperature, °C		from	up to
6.1.2.5	Other:			
6.2.1	**Bulk load of the 1st type**			
6.2.1.1	Name of material			
6.2.1.2	Load conditions (normal, frozen, caked, in pieces etc.)			
6.2.1.3	Density, t/m³	Maximum temperature, °C		
6.2.1.4	Other:			
6.2.2	**Bulk load of the 2nd type**			
6.2.1.1	Name of material			
6.2.2.2	Load conditions (normal, frozen, caked, in pieces etc.)			
6.2.2.3	Density, t/m³	Maximum temperature, °C		
6.2.2.4	Other:			

7 Load handling device type and characteristics

7.1	**Hooks** ☐	**Main hook I** ☐	One-horn hook ◯	Double-horn hook ◯
		Main hook II ☐	One-horn hook ◯	Double-horn hook ◯
		Auxiliary hook I ☐	One-horn hook ◯	Double-horn hook ◯
		Auxiliary hook II ☐	One-horn hook ◯	Double-horn hook ◯

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7.2	**Grab** ☐	Characteristics are offered by the manufacturer ☐		
		Double-rope ◯	Four-rope ◯	
		Permanent ◯	Mounted on a hook ◯	
		Manual drive ◯	Electric drive ◯	Hydraulic drive ◯
		Foreign drive ◯	Russian drive ◯	
		Drive trade mark		
		Intended for unloading wagons ◯	Not intended for unloading wagons ◯	
		Double jaw ☐	Multi jaw	
		Orientation regarding crane ropes (for double-jaw four-rope grab)	Longitudinal opening ◯	Lateral opening ◯
		Volume capacity, m³		
		Other:		
7.3	**Magnet** ☐	Characteristics are offered by the manufacturer ☐		
		Rectangular profile shape ◯	Round profile shape ◯	Special profile shape ◯
		Load capacity, t		
		Quantity, pcs.		
		Foreign drive ◯	Russian drive ◯	
		Drive trade mark		
		Type		
		Load temperature, °C	from	up to
		Other:		
7.4	**Spreader** ☐	Characteristics are offered by the manufacturer ☐		
		Permanent ◯	Mounted on a hook ◯	
		Foreign made ◯	Russian made ◯	
		Spreader trade mark		
		Manual drive ◯	Electric drive ◯	Hydraulic drive ◯

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		Container standard size			
		Replaceable by standard size ○	Sliding ○		
		Located along the crane runway ○	Located across the crane runway ○		
		Other:			
7.5	**Traverse** ☐	Characteristics are offered by the manufacturer ☐			
		Permanent ○	Mounted on hook ○		
		Vacuum traverse ☐	Hook traverse ☐	Magnet traverse ☐	
		Located along bridge girder ○	Located across bridge girder ○	Need for rotation ☐	
		Complete set of traverse			
		7.5.1 With hooks ☐	Quantity, pcs.	Lifting capacity, t	
		7.5.2 With magnet ☐	(fill in item 7.6)		
		7.5.3 With claws ☐	Separate crane mechanism ☐		
			Electric drive ○		
			Hydraulic drive ○		
		7.5.4 With slings ☐	Lifting capacity, t		
			Sling's length, mm		
			Sling type		
			Quantity, pcs.		
		7.5.5 Other			
7.6	**Pliers** ☐	Characteristics are offered by the manufacturer ☐			
		Permanent ○	Mounted on hook ○		
		Foreign made ○	Russian made ○		
		Trade mark			
		Manual drive ○	Electric drive ○	Hydraulic drive ○	
		Located along the crane runway ○	Located across the crane runway ○		
		Other			

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7.7	**Mold** ☐	Characteristics are offered by the manufacturer ☐			
		Double Hook suspension ◯	Four Hook suspension ◯		
7.8	**Automatic capture**				
7.9	**Other** (load-handling device)				
8 Constructional requirements					
8.1	**Alignment restrictions for working movements of mechanisms:**				
8.2	**Necessity for synchronization speeds when working together**	**yes** ◯	**no** ◯		
8.3	**Crane's current supply type**	**Trolley** ◯			
		Cable ◯	**Reel** ◯	**Tracking** ◯	
8.4	**Control cabin**	**Mobile** ◯	**Stationary** ◯		
8.5	**Control cabin location**				
8.6	**Type of the control system**	**Frequency** ☐			
8.7	**Complete set of the control cabin**				
9 Additional requirements					
9.1	**Lifting capacity limiter availability**	**For each winch** ☐	**Other requirements**		
9.2	**The parameter recorder setting is necessary** (Obligatory for cranes with 10t or more lifting capacity (A6-A8)	**yes** ◯	**no** ◯		
9.3	**Complete set of the crane**				

No.	Name	Unit	Qty.	TM	Manufacturer
1					
2					
3					
4					
5					

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9.4	**Technical documentation, provided by the Customer**	
Dimensional drawing ☐		**Other:**
9.5	**Painting**	
9.5.1	Enamel + primer	
9.5.2	Enamel color: yellow ☐ /	
9.6	**Additional requirements of the Customer**	
10 Customer information		
10.1	**Company name**	
10.2	**Address**	
10.3	**Contact person**	
10.4	**Phone**	
10.5	**E-mail**	

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