



1. REQUIRED INFORMATION ON THE CRANE

No.	Description	Required information	Information of the offer
1.	Working conditions		
1.1.	Time of operation	Three-shift work (3 x 8 hours)	
1.2.	Temperature of the area	-12 + 45°C	
1.3.	Wind speed during operations	0 ... 22 m/s	
1.4.	Air humidity	10 – 90 %	

No.	Description	Required information	Information of the offer
2.	Main information about the crane		
2.1.	Year of crane's manufacture	From 1988 to 1995	
2.2.	Crane weight during full operation		
2.3.	Materials to be transported	Ore, coal, palette	
2.4.	Rated load capacity	32 ton	
2.5.	Maximum speed of transshipment	1,300 ton / hour	
2.6.	Increased speed of transshipment	1,100 ton / hour	
2.7.	Type of rail	A100 DIN 536	

TECHNICAL SPECIFICATIONS

GRAB UNLOADER CRANE 32t x 35/18m

22.01.2018

Page: 2 (6)

2.8.	Mid-rail distance of the portal (the middle of one to the middle of the other rail)	18 m	
2.9.	Number of wheels at corners		
	On the seaward side	2 x 6 wheels	
	On the landward side	2 x 10 wheels	
2.10.	Distance between wheels (axle to axle)	1,000 mm	
2.11.	Diameter of wheels		
2.12.	Number of drive wheels		
	On the seaward side		
	On the landward side		
2.13.	Vertical wheel pressure		
	In operation	410 kN	
	In a storm	550 kN	
2.14.	Gantry drive distance	600 m (+- 300 m)	
2.15.	Distance between hoisting ropes	1,250 mm	
2.16.	Distance between closing ropes	780 mm	
2.17.	Steel rope system		
2.18.	Hook on frame A	Hook on frame A for affixing the arm in the up position	

No.	Description	Required information	Information of the offer
3.	Classification and standards		
3.1.	Standard	DIN 15018 / 15019 or comparable	
3.2.	Structure classification		
	Operating with grabs	H3/B5 or comparable	
	Boom hoisting	H2/B4 or comparable	
3.4.	Classification of mechanisms in accordance with DIN 15020 standard		
	Hoisting/Lowering	4 m or comparable	
	Closing/opening	4 m or comparable	
	Boom hoisting	1 Am or comparable	
	Gantry drive	2 m or comparable	
3.5.	Natural frequency	Between 0.8 and 1 Hz (in the direction of the trolley movement)	

No.	Description	Required information	Information of the offer
4.	Main dimensions		
4.1.	Crane width (from bumper to bumper)	26 m +-1m	
4.2.	Crane height above the sea rail until a closed grab	22 m	
4.3.	Drop depth above the sea rail until a closed grab	22 m	

TECHNICAL SPECIFICATIONS

GRAB UNLOADER CRANE 32t x 35/18m

22.01.2018

Page: 3 (6)

4.4.	Height above portal		
4.5.	Distance between crane legs		
4.6.	Distance between belt axle 1 to the sea rail	4.3 m	
4.7.	Distance between belt axle 2 to the sea rail	6.6 m	
4.8.	Transport belt height to the sea rail	0.77 m	
4.9.	Rail height above the middle water height	3 m	
4.10.	Distance between the middle of the sea rail and the coast line	5 m	
4.11.	Trolley driving distance	48.0 m	
4.12.	Railtrack of the operator's cab	41.6 m +- 1m	
4.13.	Actual reach from the seaward side (medium grab until the middle of the rail from the seaward side)	35 m	
4.14.	Hopper volume	80 m ³ +- 5 m ³	
4.15.	Maximum permitted weight of material in the hopper	80 ton +- 5 ton	
4.16.	Load capacity of the auxiliary elevator	5 ton +- 500 kg	
4.17.	Lifting height of the auxiliary elevator	40.0 m	

No.	Description	Required information	Information of the offer
5.	Speeds		
5.1.	Hoisting/Lowering with a nominal weight	140 m/min	
5.2.	Release of an empty grab	170 m/min	
5.3.	Closing/opening	140 m/min	
5.4.	Trolley driving with a nominal weight in the operational wind	220 m/min	
5.5.	Trolley driving without a load in the operational wind	220 m/min	
5.6.	Gantry driving with and without a load in the operational wind	25 m/min	
5.7.	The operator's cab driving with and without a load in the operational wind	40 m/min	
5.8.	Hoisting/Lowering of the auxiliary elevator	10 / 1.7 m/min	
5.9.	Trolley driving of the auxiliary elevator	16 m/min	
5.10.	Driving speed of the personal elevator	30 m/min	

No.	Description	Required information	Information of the offer
6.	Electrical parameters		
6.1.	Standard	IEC, EC directive or comparable	
6.2.	Main power supply		
	- voltage	20 kV, 3 phase, 50 Hz	

TECHNICAL SPECIFICATIONS

GRAB UNLOADER CRANE 32t x 35/18m

22.01.2018

Page: 4 (6)

	- voltage of electric motors	630 V, DC	
	- voltage for external users	400 V, 3 phase, 50 Hz	
	- control voltage	230 V, 1 phase, 50 Hz	
	- control voltage, PLC	12, 24 VDC	
6.3.	Type of power supply	Cable drum	
6.4.	Optical fibre	MM 12 optical fibre on a cable drum	
6.5.	Length of the power supply cable	+ - 300 m	
6.6.	Method of controlling the main sections	PLC	
6.7.	Power of electric motors		
	- Hoisting/Lowering	450 kW DC +- 5%	
	- closing/opening	450 kW DC +- 5%	
	- boom hoist	105 kW AC+- 5%	
	- Trolley driving	250 kW DC+- 5%	
	- Gantry driving	154 kW AC+- 5%	
6.8.	Power supply type for the arm	Cable towing	

No.	Description	Required information	Information of the offer
7.	System for cable drum and power cable		
7.1.	Power cable on a cable drum	Installed on the landward side	
	- Manufacturer		
	- Power cable	3 phase, 20 kV, 50 Hz (12 MM optical fiber)	
	- Nominal voltage	20 kV	
7.2.	Supply of water on a cable drum	Installed on the seaward side	
	- Manufacturer		
	- Type	For filling salt water from the water reservoir	
	- Pipe diameter	DN 50 mm	

No.	Description	Required information	Information of the offer
8.	Transformer station at the crane		
8.1.	Dry medium voltage transformer		
8.2.	Installed power	1,6 MW + 0,4 MW	
8.3.	Primary voltage	20 kV	
8.4.	Voltage regeneration in the network		
8.5.	Age of transformers	5 years maximum	

No.	Description	Required information	Information of the offer
9.	Electrical components		
9.1.	Controls		
9.2.	Display in Slovenian		

TECHNICAL SPECIFICATIONS

GRAB UNLOADER CRANE 32t x 35/18m

9.3.	Regulation and control switch		
9.4.	Frequency regulation		
9.5.	Age of control and electrical equipment	10 years maximum	

No.	Description	Required information	Information of the offer
10.	Cargo for transshipment		
10.1.	Coal		
	Carrying weight	0.8 t/m ³	
	Graininess	up to 50 mm	
	Special properties	Lump material	
10.2.	Iron ore		
	Carrying weight	up to 2.5 t/m ³	
	Graininess	up to 250 mm	
10.3.	Hot briquetted iron		
	Carrying weight	up to 2.5 t/m ³	
10.4.	Palette, Magnesite, Bauxite, Termomagnesite		
	Graininess	up to 250 mm	

No.	Description	Required information	Information of the offer
11.	Other requirements		
11.1.	General warranty	2 years	
11.2.	Warranty on the steel structure	5 years	
11.3.	Warranty for anti-corrosion protection	8 years	
11.4.	Option of inspection and detailed inspection of the crane	Before making the decision on the award	
11.5.	Port of Koper logo	2x on the crane arm, 2x on the engine housing	
11.6.	Colour	RAL 5017, total thickness of coats 250 microns	

No.	Description	Required information	Information of the offer
12.	Supply of the crane		
12.1.	The supply of the crane and possible modification (outside the area of Port of Koper)	6 months maximum	
12.2.	Unloading the crane onto the operative quay and making the crane operational	14 days maximum	
12.3.	Testing and delivery of the crane	1 month maximum	
12.4.	Training of maintenance staff and crane operators	15 working days	
12.5.	Assistance after the delivery of the crane	30 working days	
12.6.	Offering the supply of spare (mechanical and electrical) parts	5 years minimum after the delivery	

TECHNICAL SPECIFICATIONS
GRAB UNLOADER CRANE 32t x 35/18m