

TECHNICAL SHEET – Cold Shear**Investment: COLD BARS CUTTING SYSTEM****Machinery, technological equipment: cold shear for rebars**

No. crt.	Technical specifications requested by Tender book	Correspondence of the technical proposal with the technical specifications imposed by Tender book	Producer
1	Technical and functional parameters The system shall be installed in Donalam Targoviste /LPMici ROLLING MILL plant, part of AFV BELTRAME Group. The new Shear will be dedicated to the static cutting of cold bars, after the cooling bed, to size the different qualities and diameters at the required lengths. The machine shall follow the latest safety regulations applicable in Romania. Operating conditions: Site data: ▪ Minimum temperature: -20°C ▪ Maximum temperature: +40°C ▪ Location: inside the existing rolling mill ▪ Environment: metallurgical plant ▪ Lay-out of the rolling mill LPMici: Dwg.: LPM-0000-0000-01 Electricity supply: Supply voltage 400V ±10%, three-phase alternating current, 50Hz; Rolling mill productivity: ▪ Billet weight: up to 2066 kg ▪ RH furnace nominal capacity: 100 t/h ▪ Interbillet: 5s Working time: 3 shifts/ days, 24h/day - 7days/week, 7500 h/year		

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	Required production capacity: <table><tr><th>PRODUCT</th><th>Ø</th><th>Minimum productivity t/h</th></tr><tr><td>REB 2x SL</td><td>8</td><td>52,2</td></tr><tr><td>REB 2x SL</td><td>10</td><td>80,6</td></tr><tr><td>REB 2x SL</td><td>12</td><td>100</td></tr><tr><td>REB 2x SL</td><td>14</td><td>100</td></tr><tr><td>REB</td><td>16</td><td>100</td></tr><tr><td>REB</td><td>18</td><td>100</td></tr><tr><td>REB</td><td>20</td><td>100</td></tr><tr><td>REB</td><td>22</td><td>100</td></tr><tr><td>REB</td><td>25</td><td>100</td></tr><tr><td>REB</td><td>30</td><td>100</td></tr><tr><td>REB</td><td>32</td><td>100</td></tr><tr><td>REB</td><td>40</td><td>100</td></tr></table> ▪ Ability to cut rebars up to Ø 40 ▪ Material to cut: quality B500C and B600C ▪ Material to cut ultimate Tensile Strength= 72 kg/mm2 ▪ Minimum cutting temperature: +20°C ▪ Cutting to size from 6 meters up to 18 meters ▪ Cutting accuracy -0/+20 mm for 6 m bars, -0/+40 mm for bars from 6.1 to 18 m ▪ Cutting forces 850 ton ▪ Main motor size 630 kW and 1500 rpm	PRODUCT	Ø	Minimum productivity t/h	REB 2x SL	8	52,2	REB 2x SL	10	80,6	REB 2x SL	12	100	REB 2x SL	14	100	REB	16	100	REB	18	100	REB	20	100	REB	22	100	REB	25	100	REB	30	100	REB	32	100	REB	40	100		
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Drive: AC controlled by VFD Main Motor power shall not exceed 630 kW, actuated by variable frequency converter. Safety brake/block for blade changing operation Lubrification unit shall be equipped with at least 1 stand by motor pumps, steel tank, oil/water heat exchanger, heater, instruments, control panel	Profile	Width	Bar Linear Weight	Section	Manual	Nr. Of bar For Calculat.	Nominal Bars length	Bars from one bit	Submultiple Bar Length	Layer weight	Layer weight	Final Layer quantity	Layer Total Time	Output	Limitation Reason	Note	mm		Kg/m	mm2	Nr.	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8.0	8.80	0.395	50.3		117	72	73	48	3321	46	6	121	99.1	Barrel																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
10.0	10.90	0.617	78.6		94	72	47	36	4175	58	6	121	114.3	Barrel																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
12.0	13.08	0.888	113.1		78	72	32		4937	69	6	121	114.3	Barrel																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
14.0	15.36	1.208	153.9		67	72	24	48	5807	81	6	121	114.3	Barrel																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
16.0	17.54	1.578	201.0		58	72	18		6522	92	6	121	114.3	Barrel																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
18.0	19.82	1.998	254.5		52	72	14		7291	104	6	121	114.3	Barrel																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
20.0	22.00	2.470	314.7		46	72	12	36	8101	114	6	121	114.3	Steel Grade																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
22.0	24.28	2.980	379.6		38	72	10	36	8043	113	6	121	114.3	Steel Grade																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
25.0	27.50	3.850	490.5		30	72	7		7812	116	6	121	114.3	Steel Grade																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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No. crt.	Technical specifications requested by Tender book	Correspondence of the technical proposal with the technical specifications imposed by Tender book	Producer
	▪ Hydraulic unit dedicated to the equipment shall be included ▪ Cold shear minimum requirements.: ○ Blades = 2 ○ Knives width: >1300 mm, but not less than Roller table width ○ Mechanism type: START- STOP ○ Preliminary weight: 52.000 kg ▪ Tail removal system shall be included: ○ Automatic system to discharge tails into the underground box. ○ Tail length max. 800 mm ▪ Blades material: ○ to be specified in the proposal ▪ Length setting automatic device: ○ For cutting bars with final length 6 - 18 m ▪ Supplier shall consider reusing as much as possible the foundation of existing shear to minimize civil works and installation time Equipment / materials included: ▪ Shear for cold bars ▪ Drive system ▪ Tail removal system ▪ Blade change trolley ▪ On board blade holders ▪ Complementary blade holders ▪ On board blades ▪ Complementary blades ▪ Complementary roller holder ▪ Motor baseplate and coupling guard ▪ Tilting roller table after cold shear ▪ Gauge beam with Overhead beam and Wheeled stop ▪ Hydraulic system		

No. crt.	Technical specifications requested by Tender book	Correspondence of the technical proposal with the technical specifications imposed by Tender book	Producer
	▪ Control Pulpit Workstation ▪ HMI - Application software to be integrated in the existing rolling mill HMI ▪ Low Voltage Auxiliary AC Motors & Gearmotors ▪ Low Voltage Main AC Motors ▪ Motor Control Drives & Starters Switchboards ▪ Main AC/DC/AC Frequency Converter Service/assistance included: ▪ Supervision to mechanical and electrical equipment erection ▪ Commissioning of machine and software		
2	Performance specifications and operational safety conditions Quality requirements according to ISO 9001 or equivalent; Environmental management system certification according to ISO 14001 or equivalent; Mandatory minimum standards that must be respected: Machinery Directive 2006/42/EC II A, Low voltage 2014/35/EU or equivalent, Electromagnetic compatibility directive: 2014/30/EU or equivalent;		
3	Conditions regarding compliance with relevant standards It will be delivered with a CE declaration of conformity for the installation and certificate Machinery Directive 2006/42/EC II A		
4	Warranty conditions Warranty certificate for a period of 1 year for the system from the date of commissioning; Services provided (technical assistance, services, guarantees, post-guarantees);		
5	Other technical conditions Will be provided in the language Romanian: - Technical documentation of process design and assembly design for installation with safety distances; - Civil works basin engineering		

No. crt.	Technical specifications requested by Tender book	Correspondence of the technical proposal with the technical specifications imposed by Tender book	Producer
	- Technical documentation provided with the equipment; - Documents related to the installation; - General diagrams and functional diagrams; - Circuit diagrams; - Technological process diagram (piping and instrumentation diagram); - Operating manual of the cold shear unit; - Maintenance, maintenance and current repair manuals; - List of components; - List of spare parts; - Inspection and maintenance schedule; - Licenses and operating software included; - Civil works basin engineering shall be provided within 5 months from coming into force of the contract It will be compatible with the other equipment and software in the facility.		
6	Main exclusion - Civil works - Erection - Cables - MV/LV transformers - Power center		
7	Compatibility and Interoperability Requirements To ensure the equipment's compatibility and interoperability with the factory's existing systems, it is required: AC/DC/AC Frequency Converter ABB ACS880 series or equivalent PLC, Control Logix or equivalent		
8	Reference and capabilities The Tenderer shall demonstrate that, within the last 10 years, it has supplied and commissioned at least 2 similar items of equipment.		

No. crt.	Technical specifications requested by Tender book	Correspondence of the technical proposal with the technical specifications imposed by Tender book	Producer
	The bidder shall complete the form attached to the procurement documentation (Form no. 2).		

Beneficiary,

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Note:

Values with will be completed by the bidder.