STEELMAKING EQUIPMENT

STEEL AND CAST IRON CASTING LADLES

Casting ladles are designed to receive molten metal from the melting unit, transfer it to the casting site and cast it into the casting forms.

The ladle consists of: ladle (body) of the welded construction, lifting beam, splashing plate, ladle dumping drive. The ladle drive is protected from heat impact with special housing. Metal may be casted by way of ladle dumping with electromechanical (mechanical hand) drive or with the lever type stopper equipment.

Steel-teeming ladles locking

LADLE CAPACITY, t	WIDTH, mm	HEIGHT, mm	LADLE DIAMETER, mm	WEIGHT, kg	Number of the stopper
5	3167	1900	1400	2682	1
6	3220	1830	1420	2080	1
7	2760	2100	1425	2821	1
8	3450	2290	1547	2486	1
10	3740	2230	1600	3484	1; 2
12	3715	2365	1690	3025	1
30	3285	3400	2300	8112	2 (without cross beams)
40	3122	3354	2300	7139	2

Steel-teeming ladles cinemovie

LADLE CAPACITY, t	WIDTH, mm	HEIGHT, mm	LADLE DIAMETER, mm	WEIGHT, kg	REDUCER
1,5	2120	1725	966	898	cone-worm
3	2495	2600	1125	1438	

Ladles drum

LADLE CAPACITY, t	WIDTH, mm	HEIGHT, mm	LADLE DIAMETER, mm	WEIGHT, kg	REDUCER
0,25	1240	970	500	265	cone-worm
5	2735	2450	1020	3320	

Ladles for pouring of cast iron

LADLE CAPACITY, t	WIDTH, mm	HEIGHT, mm	LADLE DIAMETER, mm	WEIGHT, kg	LADLE DUMPING GEAR
0,8	1300	1335	660	390	hand
1	1530	1205	760	287	hand
2	2460	1600	860	723	hand
3	1909	1230	1100	788	hand
5	2442	2100	1168	2575	electromechanical / hand
7	2893	2522	1400	2262	hand
10	3200	3303	1585	4920	electromechanical / hand
20	3700	2416	1710	3645	hand
160	4970	4860	3610	24295	without gear

Manufacturing period – 30 days

СТОЛ ДЛЯ ОХЛАЖДЕНИЯ ЗАГОТОВОК МНЛЗ

Предназначен для равномерного охлаждения заготовок MNLZ.

SPECIFICATIONS	VALUE
Length, mm	29330
Width, mm	14220
Height,, mm	4005
Size section billet, mm	100x100, 120x120, 140x140
Время прохождения заготовок, мин	30
Weight, kg	226580

METALLURGICAL PLATFORM

Standard series: ПМ180-5500/1520У, ПМ250-7400/1520У.
Metallurgical platform is designed to transport casting forms (either empty or filled with molten metal) between the shops of metallurgical plant.
The frame, bolster and balance beam of the platform are heavy-duty. The platform is equipped with enhanced spring complex. The protection of the running wheels, springs and protection axle-boxes from molten metal overflow are provided due to the frame expansion and extension, increased side walls height and enhanced spring complex. The exchangeable pivot blocks are also installed on the bolster that increases the serviceability of the unit by far.

The metallurgical platform consists of:
- frame;
- carriage;
- coupling unit.

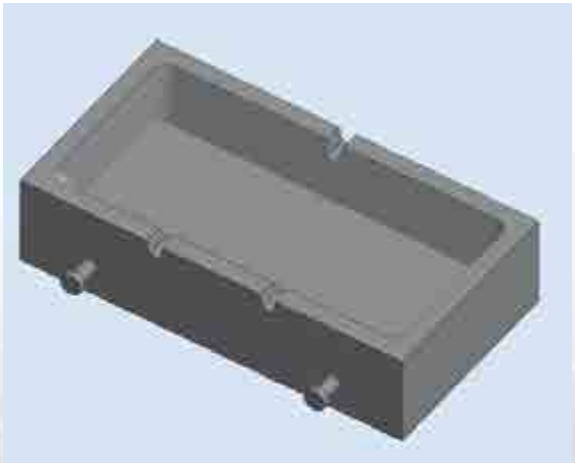
Advantages:
- increased operational life of springs and bearing supports;
- enhanced serviceability.

SPECIFICATIONS	VALUE	
Type	PM-180	PM-250
Loading capacity, t	180	250
Number of platforms in a set, max, pcs.	15	10
Minimum radius of curve negotiation, m	55	55
Track width, mm	1520, 1435	1520, 1435
Number of wheel pairs, pcs	4	6
Overall dimensions, mm: - length - width - height	 5800 2870 1080	 7700 2870 1130
Weight, kg	26000	40000

Manufacturing period – 80 days

CASTING FORMS AND STANDS

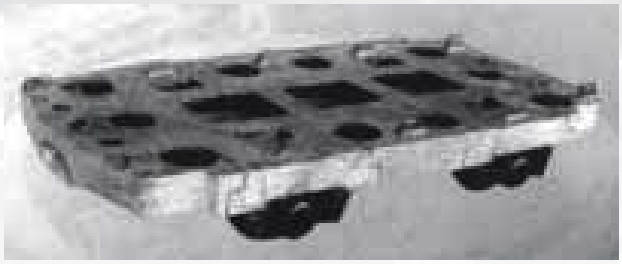
Casting forms and stands are used to cast the ferroalloys applied for the purpose of steel deoxidation and alloying.



SPECIFICATIONS	VALUE	
Type	one-sided	two-sided
Overall dimensions, max, mm: - length, - width, - height,	 2200 1480 530	 2200 1440 330
Weight, max, kg	7000	4500

Manufacturing period – 45 days

BOGIE



Bogie (TRP 45-4) is designed to transport the molds with scrap from the stockyard to the Martin furnace charging aisle.

The bogie consists of:

- wheelpairs with axle-boxes;
- bogie frame;
- automatic coupler.

Advantages:

- high reliability;
- increased life cycle.

SPECIFICATIONS	VALUE
Loading capacity, t	45
Track gauge, mm	1520
Overall dimensions, mm: - length - width - height (unloaded)	 5155 2460 903
Weight, kg	11000

Manufacturing period – 80 days

TRANSFER BOGIE, L/C 160 T

Transfer bogie with l/c of 160 t is designed to transport the slabs between the shop passages.

The bogie consists of: frame, carriage, electric drive, centralized hydraulic lubrication system, current-collecting device.

The bogie moves along the track that is up to 55 m long. The travel path is straight. Bogie operation cycle (loading and transportation of the slabs to the shop, their unloading and bogie return) makes 8-9 minutes. The bogie operation is hand-controlled. The assembled bogie with electrical equipment and control equipment installed thereto are included to the scope of supply.

SPECIFICATIONS	VALUE
Loading capacity, t	160
Track gauge, mm	5000
Travel rate rate, m/s	0,45
Overall platform dimensions, mm:	
Height above rail head*width*length	2100* 7500*3200
Weight, max, kg	49400

Manufacturing period – 15 days

TROLLEY FOR TWO SLAG LADLE

Trolley for rolling out two slag ladles of 8 and 16 m^3 is designed for the transport of slag ladles between spans metallurgical shops.

SPECIFICATIONS	VALUE
Loading capacity, t	155
Overall dimensions, mm: - length - width - height	 11000 4300 3130
Track gauge, mm	2200
Weight, kg	50878

Manufacturing period – 80 days

STUB BOGIE, L/C 125 T

Stub bogie with loading capacity of 125 t is designed to transport the slabs piles with the height of up to 2,7 m with the temperature of up to 800°C from the continuous casting plants to the bays of the slab warehouses of the rolling-mill shop. The stub bogie is designed with due account of travelling along the linear or nonlinear sections. The operational cycle of the stub bogie, including the slab loading, transportation, unloading and return of the empty bogie, makes 20-25 min. The bogie may be hand and automatically (main) operated.

The bogie consists of:
- frame;
- two carriages;
- electric drives;
- automated centralized hydraulic lubrication system;
- automatic couplers.
- high reliability.

The lining of the bogie is performed by the Customer.

SPECIFICATIONS	VALUE
Loading capacity, t	125
Track gauge, mm	1520
Travel rate rate, m/s	0,85
Overall platform dimensions, mm: - length*width*height above rail head	7000*2200*1470
Weight, max, kg	30000

Manufacturing period – 80 days

MOTOR STUB BOGIE

Motor stub bogie is designed to transport the products during the technological production cycle.

The motor stub bogie consists of:
- frame;
- wheels (driving and running);
- guard (front, rare, side);
- drive;
- electric equipment.

Advantages:
- large carrying capacity;
- low operating costs;
- maintainability.

SPECIFICATIONS	VALUE						
Loading capacity, t	5	10		20	32	50	80
Travel rate rate, m/s	0,53	0,53		0,39	0,49	0,45	0,5
Track gauge, mm	1000	1520	1000	1520	1520	1520	6400
Base, mm	1600	2700	1600	2800	2800	3160	1500
Overall platform dimensions, mm:	780	870	785	935	935	1250	2100
- height above rail head	1600	2100	1650	2100	2300	2500	9595
- width	3000	3400	3300	4500	4500	5000	2800
- length	3000	3300	3400	5100	5500	12100	34860
Weight, kg	3187	3387	5561	5420			

Manufacturing period – 80 days

The bogies with different parameters may be produced.

WHEELPAIRS

Wheelpair is a component part of the bogies designed to transfer the slag ladle cars, hot metal ladle cars, certain models of car dumpers, bogies, bogies for casting forms with loading capacity of 160 t and 240 t, metallurgical platforms with loading capacity of 180 t and 250 t.

SPECIFICATIONS	VALUE			
Model	MR 7.1	MR 7.2	MR 7.3	MR 7.4
	KP 170x840	TI 140x650	MD 120x650	PM 140x840
Rolling diameter, mm	840	650	650	840
Axle diameter for the axle box bearing, mm	170	140	120	140
Track gauge, mm	1520	1520	1520	1520
Weight, kg	1530	994	964	1343

Manufacturing period – 15 days