PADIDEH
FOULAD
ARAS

PADIDEH FOULAD ARAS

PADIDEH FOOLAD ARAS
CCM CATALOGUE

2023

Successful cases show

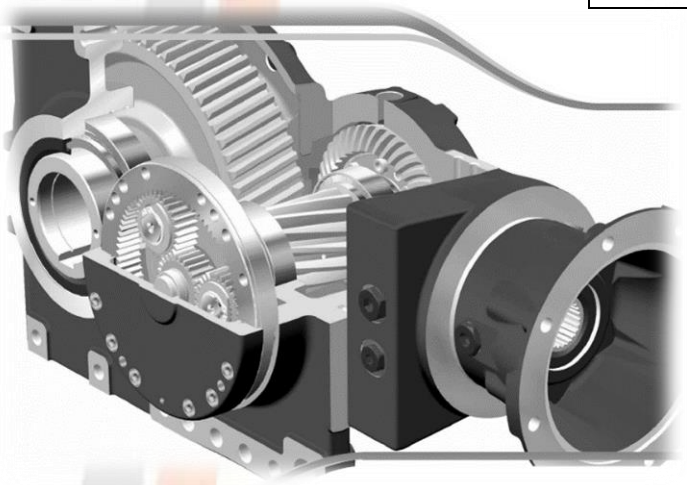
○	Dzulakentron OSJC	CCM R6-11, Two Strand	**2023**
○	GTNJ Steel	Installation and Utilization (CCM&Furnaces)	**2023**
○	Armenia Union Steel	CCM R6-11, One Strand	**2022**
○	Azarabadegan Aras Steel Co.	EPC, CCM R6-11, Two Strand	**2021**
○	Pars Haft Tapeh Steel	Installation and Utilization (CCM&Furnaces)	**2020**

No.	Item	Basic Data
1	**STEEL STRUCTURE & Civil**	Based on Factory Layout and Area
	Machine structure suitable comprising	
2	**CASTING EQUIPMENT**	
	Mold Oscillation Mechanism	Redesign Based on Danieli and Tunned for 1 Strand casting Lines
	Drive Beam for Mold Oscillation	
	Mold Operators Control Pendant Arm	
	Cooling Chamber Rollers	
	Withdrawal & Straightening Unit	
	Cooling Chamber Rollers	
	Intermediate Roller Table	
	Rigid Dummy Bar System	
3	**DISCHARGE EQUIPMENT**	
	Discharge Roller Table	
	Hydraulic Pusher	
4	**ACCESSORIES**	
	Hydraulic Power Unit	Rexroth, Parker, Duplomatic
	Gear Boxes	Brevini, SEW
	Cylinders	Novin Hydraulic (Iran)
5	**UTILITY PIPING (Pipes, valves, fittings & hoses from T.O.P.)**	
6	**ELECTRICALS**	ABB, Europe Made Parts
	Motors for:	Motogen, Electrogen, SEW
	- Mold Oscillation	
	- Withdrawal / Straightener Drive	
	- Intermediate Roller Table	
	- Discharge Roller Tables	
	- Hydraulic Power Pack	
7	**Instrumentation consisting of:**	Endress Hauser, Europe Made Parts
	- Temperature indicator with RTD Sensor	
	- Magnetic flow meter with indicator for primary water	
	- Pressure switches for primary & secondary cooling water	
	- Molten Metal Temperature Measuring System	
	- Casting Speed indicators (digital)	
	- Mold Oscillation Frequency indicator	
	- Limit Switches	
	MCC, A.C. Drives, Control Panels & P.B. Station	
8	SECONDARY (SPRAY) WATER AUTOMATION	Siemens
	Programmable Logic Controller (PLC)	
	Human, Machine Operator Interface (HMI)	

Gear Boxes One of the most important parts of the CCM is the gearboxes of the S&W. With the cooperation and support of Brevini Italy, we assure our customers that they will have the highest quality in this field

BPH

Raw	Title	Description
1	Type	Bevel Planetary Helical Gearbox
2	Ratio	100-1100
3	Torque	4800-8500 Nm
4	Efficiency	95 %



DANA BREVINI® Motion Systems

BENEFITS

HIGHLLY RATIO TRANSFER

COMPACT SIZE

EU QUALITY

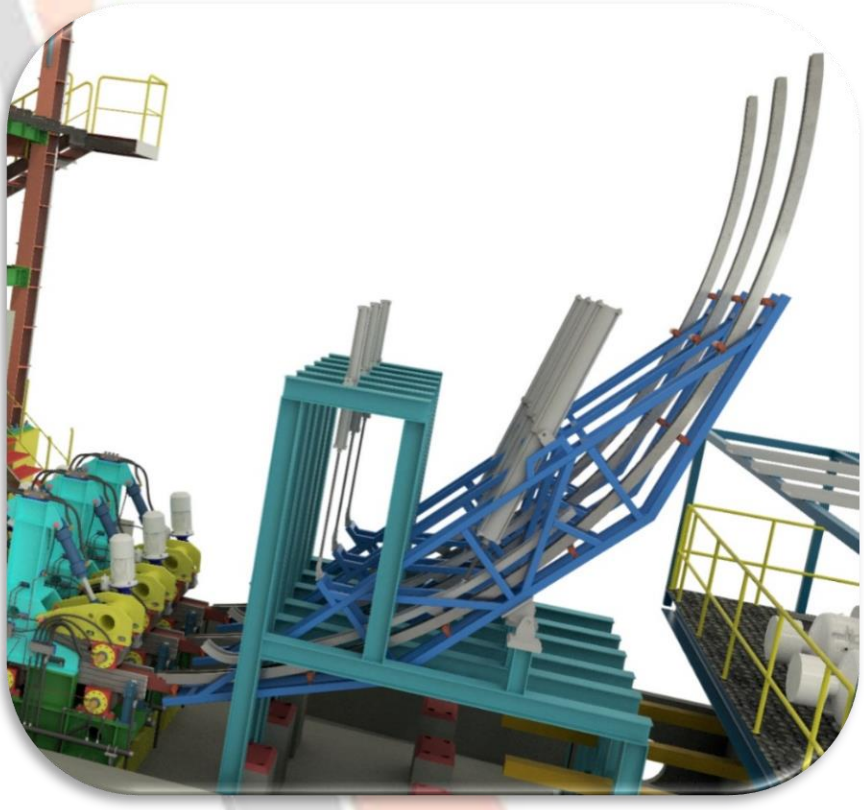
PADIDEH FOULAD ARAS

New Dummy Bar Driverless System According to the latest and most up-to-date design in the world, the movement of Dummy Bar is done by hydraulic or pneumatic cylinders.

In the old systems, this movement was done by the Gearmotors and chains, which caused many problems in repairs and environmental conditions.

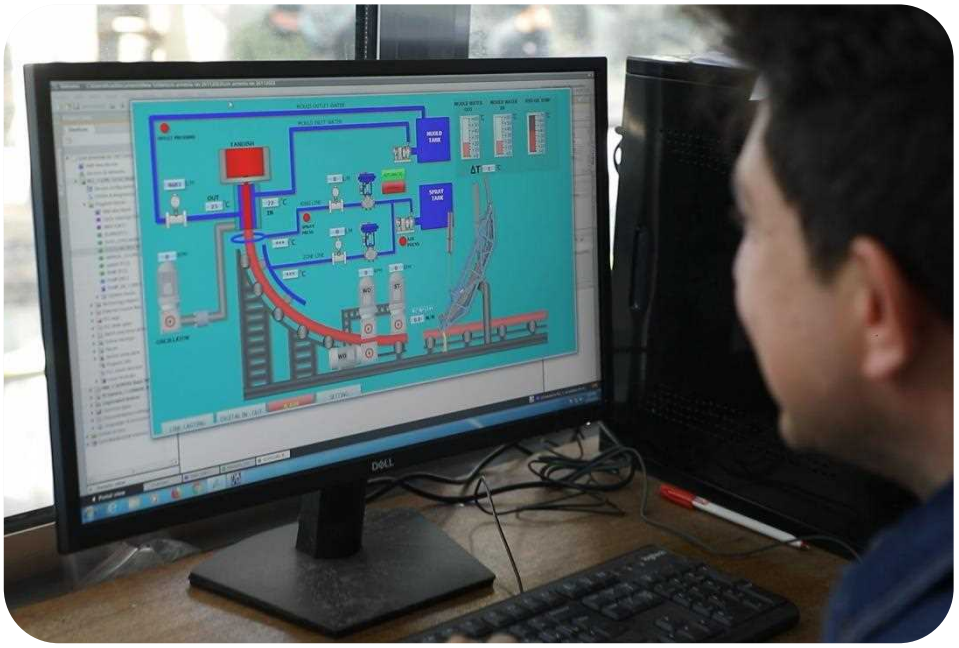
BENEFITS

- **DRIVERLESS**
- **HIGHLLY** SAFETY
- **ZERO** DEPRECIATION



- **SIMPLE** DESIGN
- **NEW** METHOD
- **PARK** ABLE

Electricals:



a. **A.C. Motors** for Mold Oscillator, Withdrawal machine, Tundish car, Roller table, Exhaust fan, Hydraulic Power Pack are TEFC continuously rated squirrel cage induction motors in IEC frame sizes having class 'B' insulation. Details will be provided after finalizing the order.

b. **Motor Control Centre** Located in electrical room. Degree of protection provided is IP 50 as per IS 2147. **MCC Include**:

One incoming switch fuse unit, starters, control fuses, contactors, overload relay and necessary relays for interlocks. MCC is suitable for remote control from remote control stations with control desk, Mold operator's pendent controls and local stations.

c. **A.C. Drive Panel** for Withdrawal / Straightening Machine (ABB) and Mold Oscillator Located in electrical room.

d. **Pendent digital control for operation** is Located on casting platform near Mold s. It houses controls for casting the heat such as start stop cast, speed variable pot, inching push button, rotary switch for mode selection, casting speed display and frequency display.

e. **Annunciator Alarm system panel** is Located on casting platform. It houses controls for Molten steel temperature recorder, Mold water inlet and outlet temperature indicators, hooter and fault display.

f. **Control Desk** is Located near roller table area. It houses controls for Conveyor roller tables, Dummy bar Receiver and dummy bar inching, Pusher, Withdrawal roll up and down, Hydraulic pumps and necessary indicating lamps.

g. **Push button Station/ Local Station** it is located near cooling chamber and consists of Casting speed indicators.

Instrumentation/Automation

h. **Water Temperature Indicators** are provided for measuring Mold water inlet and outlet temperatures. These are panel mounting type with RTD Sensors having range from 0 to 100 Degree C.

i. **Pressure gauges** for primary, secondary cooling water circuit range 0 to 10 Kg/cm2.

j. **Molten Metal Temperature measuring system** is of digital monitoring and display system for molten steel temperature. Measurement system consisting of:

Display for temperature.

Measuring point panel for connecting with main instrument. Complete with audio-visual system such as lamps, hooters etc.

k. **Casting Speed Indicators** Panel mounting type, calibrated to read 0-5 metes/min.

l. **Lance for temperature measuring system** consists of lance pipe, compensating cable and receptacle.

m. **Flow meters** are provided for Mold water on casting platform.

Variable speed drives are provided for Mold oscillation and withdrawal machines.

Gearboxes are Italian made units with high ratio 1:374 for transporting movements with best results


PADIDEH AR

Automatic Walking Beam Cooling Bed

Cooling bed is an important equipment in the field of steel casting. It used to receive, transmission and cooling the rolled Billets. After sizing or reducing, the temperature of Billet is generally above 700 °C. It must be cooled to below 150 °C for subsequent finishing process. The billet cooling is usually carried out on cooling bed.

The finished products are delivered to cooling bed via conveying roller table, and then extracted by the rack step by step, being pushed to the top of cooling bed, to achieve the effect of cooling rolled piece.

The cooling bed equipment is mainly used for naturally slow on-line cooling of rolled steel billets. In the profile production line, cooling bed also has the function of preventing bending, to prevent irregular curve of profiles through the process of natural cooling due to various quality problems. Areas of application: mainly used in steel industry, metallurgical industry, rebar production line, round production line, pipe production line, etc.

Advantage: (1) simple structure; (2) low investment; (3) easy operation.