



**Expert solutions. Dependable service.** 



| Solutions | Service | Satisfaction |

# **Proven Solutions for Steel & Metal Industry**



# Capacity up to 600t

Higher SWL on demand









# Lifting height up to 33m

Higher HOL on demand









Higher productivity















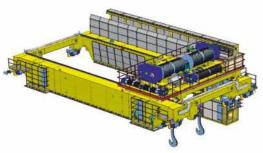


# Span up to 40m

Higher SPAN on demand

















High level of safety & reliability



## **Technology from Experts**

#### **About ElectroMech**

Established in 1979, ElectroMech is the largest manufacturer of industrial cranes and related material handling equipment in India. We are recognised for unique solutions for the most challenging material handling requirements across a wide spectrum of industries. We are highly relied upon for our design capability, high manufacturing standards and service excellence. Since inception, ElectroMech has commissioned over 6500 cranes in around 50 countries across the world, with an unmatched track record of repeat orders.

Headquarters and main manufacturing plant of ElectroMech is in Pune, India. Spread over 85,000 sq.m, with a covered area of 20,000 sq.m, this factory is one of the single largest dedicated overhead crane manufacturing facilities in Asia. The plant has capacity of manufacturing over 1500 cranes every year.

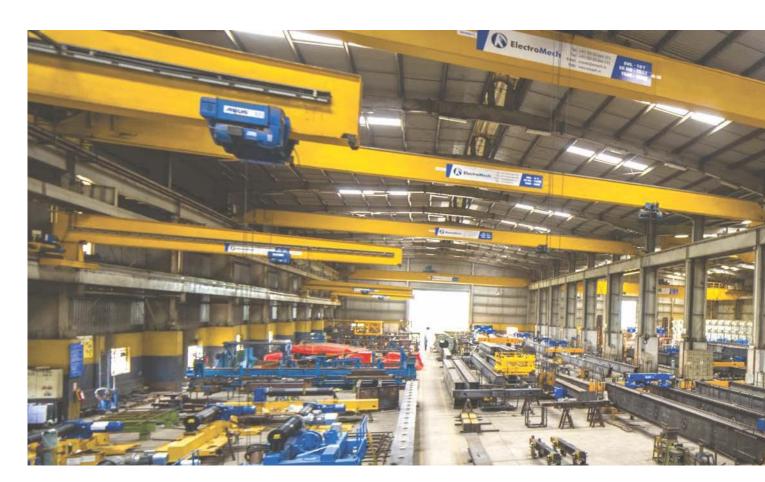
Our manufacturing techniques are industry leading, from CNC plasma cutting machines for crane girders to shot blasting and a

dedicated paint booth for finished crane components. Our quality management systems have been certified by Bureau Veritas for the latest ISO 9001:2015 requirements.

Further, to ensure that we meet the challenges of various industries, we have collaborated with several global leaders. We have an exclusive tie-up for India with Abus Crane Systems, Germany, offering overhead travelling cranes up to 125t, right down to compact chain hoists to lift 80kg, and a wide range of crane accessories and hi-tech crane components.

We also have tied-up with Stahl CraneSystems, Germany, a world leader in Explosion-protected (Ex) cranes and components. Through this tie-up, we offer safest lifting solutions in India for use in hazardous, explosion-prone areas.

ElectroMech recently entered an agreement with Hyster-Yale®, United States, for the sales and service of the Yale® brand of





forklifts and lift trucks in India. This association benefits from the leadership position of ElectroMech in the Indian market and is bolstered by the renowned global technologies from Hyster-Yale®.

We have a joint venture with one of the world's largest construction equipment companies, Zoomlion Heavy Industry Science and Technology Co. Ltd., China. The Joint Venture company Zoomlion-ElectroMech manufactures and markets a range of Tower Cranes and Construction Hoists.

In association with Easy Mover Rejmyre Maskin AB, Sweden we have recently introduced the Easy Mover range of rollers, pushers and push-pull manoeuvre. Easy Mover is a simple machine ideal for moving heavy loads up to 100t single-handedly.

ElectroMech has recently tied up with Taim Weser S. A., Spain for application specific cranes and higher capacity liquid metal

handling cranes in steel and metal industries, special purpose cranes in non-ferrous industry, nuclear plants, waste to energy plants and coker cranes for oil refineries.

Over the years, ElectroMech has supplied customised material handling solutions to the challenging requirements in sectors such as steel and metals, oil & gas, nuclear plants, energy and power sector, general engineering, infrastructure, automobiles, railways, pharma, chemicals, water treatment, shipbuilding, etc.

It is our endeavour to maximise value to our customers in terms of the cost of ownership, high reliability, high safety and ultimately higher productivity. ElectroMech is proud to be at the forefront of technology with an evolving product range that provides our customers with the best possible solutions, be it advanced safety features or fully customised equipment.









Introduction I

# **Technology from Experts**

### **About Taim Weser**

Taim Weser is a global organisation with over 100 years' experience and installations in 59 countries. Its headquarter and main factory is located at Zaragoza in Spain.

The company is renowned in the areas of material handling, lifting, waste treatment and renewable energy projects. Innovative approach, own developed engineering, high capacity heavy equipment manufacturing, advanced technology, highly reliable products and efficient project management make Taim Weser a leading company in the domain.

Taim Weser offers several solutions for the steel sector which include very critical hot liquid metal ladle handling cranes for furnace charging, teeming and casting operations, tong cranes

for rolling mills, coil handling cranes, scrap handling cranes and cranes for forge shops.

Based on the principles of redundant drives and remote control developed for the nuclear industry, Taim Weser cranes use the same technology for the steel industry leading to the remote control of the various types of cranes from a control room without direct vision of the crane.

Besides various options for crane automation and remote control, Taim Weser cranes are built with special customised features. They include redundancy in motors, variable frequency drives, air-conditioners, rope reeving system and with emergency brakes for rope-drums, electric room, load monitoring system, etc.



### **End-to-End Solutions**

#### From ElectroMech in association with Taim Weser

ElectroMech, in association with Taim Weser, brings end-to-end handling solutions for the entire value chain of the steel sector.

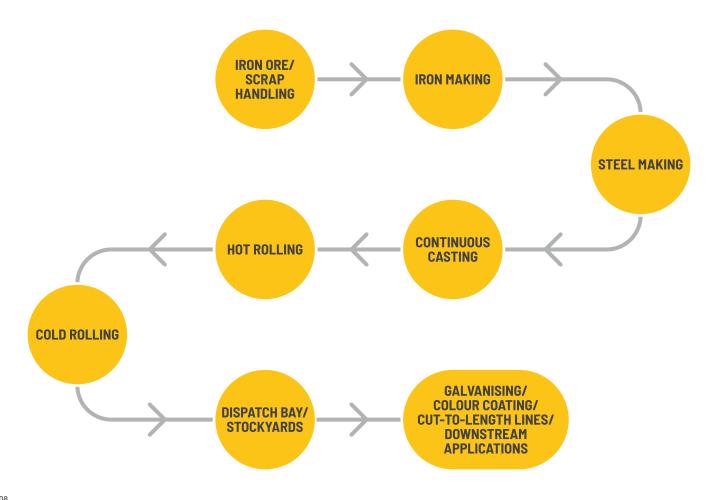
Being a continuous process industry operating 24X7, the steel and metal industry has very peculiar requirements. This demands for a highly reliable material handling equipment which has a robust and sturdy construction. The equipment must be of proven design and manufactured using advanced technology while adhering to the latest manufacturing practices. Moreover, efficient and dependable after-sales-service is equally crucial.

ElectroMech - Taim Weser partnership is a defining moment in this aspect, thanks to the growing and technologically advanced

needs of the steel industry worldwide. Taim weser has experience of supplying heavy duty cranes up to 600t SWL. Taim Weser also possesses good experience in metal plants such as copper smelter and refinery having supplied special purpose Tank House Refinery cranes. They have also supplied Coker cranes to oil refineries and special purpose cranes to the nuclear industry.

ElectroMech also possesses vast experience in the steel sector through its range of solutions for critical applications such as hot liquid metal handling in iron/steel making processes, ingot handling, slab/billet/bar handling, coil handling, cut-to-length lines, in forge shops and foundries.

#### Solutions across the entire value chain of the steel sector







| Solutions |

# **Scrap Handling Cranes**

These are typically double girder EOT/Gantry cranes with longer spans and rugged design that offer high speeds.

These cranes essentially come with an attachment such as grab buckets or magnets to lift the scrap.

Scrap handling cranes from ElectroMech - Taim Weser are designed to perform round the clock and mostly in outdoor locations in a steel plant.



ArcelorMittal, Zaragoza (Spain)

130	t	3.6m	45m/min	
Capa	city	Span	Transfer car travel speed	

#### ITRITEC GmbH, SKS Company Steel Plant (Iran)

110/30/5t	31m	28/28m	60m/min	30m/min	6m/min	
Capacity	Span	HOL	Crane travel speed	Trolley travel speed	Main hoisting speed	



# **Liquid Metal Handling Cranes**



ArcelorMittal Galati, Galati (Romania)

Capacity	Span	HOL	Crane travel speed	Trolley travel speed	Main hoisting speed
300/100/20t	15.50m	21-24m	80m/min	30m/min	9m/min

The scrap charging/liquid metal handling cranes assume great significance in a steel plant as they typically operate in the heart of a steel plant i.e. in an iron making/steel melting/casting shop.

ElectroMech, in association with Taim Weser, offers cranes which are used to charge scrap in a melting furnace or to lift ladles full of molten metal with temperature of 1400°C. The cranes are designed to withstand the surrounding atmosphere which is completely dust laden and has a temperature above 60°C. The cranes are capable of operating inside the shop at their rated full load capacity, round the clock with comparatively moderate speeds.

These cranes from the ElectroMech – Taim Weser association offer a very high level of safety and reliability features such as 2/4

#### ITRITEC GmbH, SKS Company Steel Plant (Iran)

Capacity	Span	HOL	Crane travel speed	Trolley travel speed	Main hoisting speed
320(350)/70/5t	31m	28/28m	60m/min	30m/min	3/6m/min







motors with planetary gearing system, integral laminated hooks for lifting, emergency brakes for main hoist motion which lifts molten metal, heat shields and redundancy provision for select motions, control systems, air-conditioning, etc. The control systems are housed in a separate electric room placed onto the platform or inside the girders, both arrangements being fully airconditioned.

The cranes come in different configurations such as two or four girders and trolley on trolley to meet the process requirements and layout needs.

Taim Weser possesses vast experience in this field and has supplied several such cranes to leading steel makers across the world.



Celsa U.K., Cardiff (United Kingdom)

Capacity	Span	HOL	Crane travel speed	Trolley travel speed	Main hoisting speed
250/50t	27m	20m	60m/min	30m/min	8m/min

#### Usiminas, Ipatinga (Brazil)

260/40t	18.9m	24.5/27m	8-80m/min	3-30m/min	1-10m/min
Capacity	Span	HOL	Crane travel speed	Trolley travel speed	Main hoisting speed



# Slab/Plate/Coil Handling Cranes

The slab/plate/coil handling cranes are the production cranes working in a hot or cold rolling mill. These cranes are the nerves of a steel plant as they reflect on the overall productivity in terms of production of saleable steel and thereby return-on-investment.

These cranes from ElectroMech - Taim Weser are typically double girder type, mostly indoor and operate continuously at very high speeds in the surrounding temperature of 45-60°C depending on the type of the mill. The attachments include integral or detachable tongs, magnets, etc.

The cranes in hot rolling mill necessitate control panels to be housed in air-conditioned electric rooms placed on platforms. These cranes also some times deploy PLC based yard management system to ensure higher throughput. The magnets are provided with a battery back-up system as a safety measure in case of a sudden power outage.



			Crane travel	Trollev
iyisa, Nuevo Le	on (Mexico	)		

Сар	pacity	Span	HOL	speed	speed	speed
				Crane travel	Trolley travel	Main hoisting

#### ACERALIA (ArcelorMittal), Avilés (Spain)

Capacity 125/50t	34(2)/33.4(2)m	9 1/16 6m	<u>'</u>	60m/min	Main hoisting speed			
125/350 04(2)/05.4(2)/11 3.1/10.0111 125/11/11111 05/11/11111								







| Solutions |

# **Bloom/Billet/Bar Handling Cranes**

The bloom/billet/bar handling cranes are also production cranes working in a hot rolling mill and assume an important role in determining the overall productivity of the plant.

ElectroMech and Taim Weser have supplied several such cranes to leading steel plants globally.

These are double girder type, heavy-duty cranes which are capable of performing in a dusty atmosphere and operate continuously at very high speeds in the surrounding temperature of  $60^{\circ}$ C. The attachments normally include integral or detachable lifting beam with magnets. The cranes necessitate control panels to be housed in air-conditioned electric rooms placed on platforms. The magnets are provided with a battery back-up system as a safety measure in case of a sudden power failure.



ArcelorMittal, Zaragoza (Spain)

Capacity	Span	HOL	Crane travel speed	Trolley travel speed	Main hoisting speed
25t	32.5m	14m	60m/min	30m/min	12m/min

#### ITRITEC GmbH, SKS Company Steel Plant (Iran)

Capacity	Span	HOL	Crane travel speed	Trolley travel speed	Main hoisting speed
24(35)/5t	31m	10m	100m/min	30m/min	10m/min
. ) (	M	-			



# **Rotating Trolley/Rotating Beam Cranes**

The rotating trolley or rotating beam cranes are special purpose cranes that are necessitated out of layout constraints of a plant and used to handle long billets/bars/sections for movement across the bays. The slewing motion is achieved with the help of a motor driven slew bearing mounted on a trolley frame or on a suspended beam.

The cranes are of double girder type, indoor/outdoor and operate continuously at very high speeds in the surrounding temperature of  $50^{\circ}$ C. The attachments normally include integral or detachable lifting beam with magnets/tongs, etc. The crane control panels can be housed in air-conditioned electric rooms placed on platforms or outside with built-in panel air-conditioner. The magnets are provided with a battery back-up system as a safety measure in case of a sudden power failure.

ElectroMech has a considerable experience in this field and together with Taim Weser, can offer highly reliable solutions.

Crane travel speed

Trolley travel speed



E0/9+	35 5m	7/10m	120m/min	40m/min	8m/min			
Capacity	Span	HOL	Crane travel speed	Trolley travel speed	Main hoisting speed			
Carinox, Chatelineau (Belgium)								

#### BMM Ispat Ltd., Hospet (India)

Span

Capacity

20t	32.8m	11.5m	100m/min	40m/min	15m/min
	Y	1			

Main hoisting speed





| Solutions |

## **Tank House Cranes**

Tank house cranes are often called as refinery cranes since they work in the refinery section of a copper plant. These cranes are highly sophisticated cranes with full or semi-automated operation and are used to handle precise movements of copper anodes and cathodes during electrolysis process.

The cranes are designed to perform round the clock in a highly acidic surrounding atmosphere at very high speeds. A special box-type bale with multiple small revolving hooks is suspended from the trolley to lift sets of anodes and cathodes from the acid tank cells.

Some times the cranes are provided with independently moving cabins across the crane girder. ElectroMech can offer these cranes by leveraging the experience and expertise of Taim Weser in this field.



Met-Mex Peñoles, Torreon (Mexico)

Capacity	Span	Crane travel speed	Trolley travel speed	Main hoisting speed	
17t	13.36m	60m/min	3m/min	12m/min	

#### Met-Mex Peñoles, Torreon (Mexico)

24t	13.36m	120m/min	20m/min	
Capacity	Span	Crane travel speed	Main hoisting speed	



### **Other Cranes**

### **Converter Cranes**

Converter cranes in a smelter plant handle liquid copper and have almost all features like liquid iron/steel ladle handling cranes.

The surrounding atmosphere is however, highly acidic and hence proper design and selection of components need to be ensured.

ElectroMech, together with Taim Weser, can address these critical demands and offer perfectly proven solutions.

### **Lance Handling Cranes**

Lance handling cranes typically work in a highly dusty atmosphere in a melting shop with temperature ranging above 60°C.

The crane is situated above the furnace in which oxygen is blown through lancing operation. The cranes have to operate at a very high height of lift and in challenging layouts.

### **Galvanising Plant Cranes**



### **Dispatch Bay/Stockyards Cranes**











| Service |

Services Partner





### Your safety and productivity are our priorities

#### Service, safety & maintenance at Cranedge

ElectroMech is committed to pursue the concept of offering 'Service at Your Doorstep' with a clear goal of reaching 'Zero Downtime' and of building 'Lifetime Relationships' with customers.

Cranedge, a subsidiary company of ElectroMech is dedicated to extending support in safety, service and preventive/breakdown maintenance of cranes and other material handling equipment.

As a specialist service provider, Cranedge is equipped with and backed by resources which are essential prerequisites for ElectroMech to excel in customer care and to ensure a high level of customer satisfaction. Cranedge extends its service support to cranes of other makes as well.









#### Cranedge service offerings: Lifecycle approach

- > Optimization of Spares Inventory
- > Services and Overhauling
- > Annual Maintenance Contract
- Health Check-up for Cranes
- > Modifications and Retrofits
- Relocation of Cranes
- > Crane Safety Certification

For more details

Visit: www.cranedge.com
E-mail: youredge@cranedge.com
Call: Toll-free 1800 209 0010

## **A World of Satisfaction**

#### Esteemed customers of ElectroMech in steel sector































#### Global customers of Taim Weser in steel & metal sector





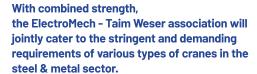


































Rollers, Pushers & Push-Pull Manoeuvre



Explosionprotected Hoists & Cranes



Cocker Cranes, Process & Port Cranes



Lift Trucks & Warehousing Solutions



Expert aftersales support for material handling equipment

### Material handling solutions for the world since 1979



Corporate Office & Plant

**ElectroMech Material Handling** Systems (India) Pvt. Ltd.

Gat No. 316, At post Kasar Amboli, Tal. Mulshi, Dist. Pune 412 111 INDIA

Telefax: +91-20-6654 2222 E-mail: cranes@emech.in

Our presence across the world

Bahrain | India | Indonesia | Italy | Kenya | Nigeria | Oman | Qatar | Saudi Arabia | Sri Lanka | UAE



























emech.com

