ElectroMech

Solutions | Service | Satisfaction

Newsletter Q 1 : 2014-15

Giant cranes for Kochi Metro precast yard

Integrating handling at Air Liquide, UAE

Setting wheels of the automobile industry in motion

EMPOWER

Lifting & Handling

Displaying the prowess of our solutions capability in a true blue steel plant at BMM Ispat Ltd.

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News from ElectroMech FZE

Mr. Rohan Warty joins as CEO, ElectroMech FZE

ElectroMech is very happy to announce that Mr. Rohan Warty has been appointed as the CEO of ElectroMech FZE from 1st April, 2014. Prior to taking on this new assignment, Rohan worked with ElectroMech as General Manager - Sales & Marketing from 2003 to 2013. During his tenure at ElectroMech India, he was responsible for developing the Sales & Marketing functions of the company from scratch and he successfully delivered a consistent growth in the company's order bookings. He was also actively involved in the operations of the company and has a thorough knowledge of the entire business.

A qualified Mechanical Engineer, Rohan has also attended various executive management programmes of premier institutes in India.

Rohan's vast experience of working in the crane industry and exposure to companies engaged in manufacturing capital goods have armed him with the right arsenal of tools to lead ElectroMech FZE into a new era of excellence and growth.

We wish him all the best in his new assignment.

Take my word!

Dear customers, colleagues,
business associates and well wishers of ElectroMech,

There are clear indications that favourable winds have started blowing once again in the industry's favour. The global economy is on the rebound and the Indian economy is perched on the verge of explosive growth once again. Indeed exciting times are ahead for all of us and we are happy to be your partner in helping you 'handle' this growth.

In the last issue, we had mentioned as to how our subsidiary in UAE, ElectroMech FZE had secured a prestigious order for the Air Liquide group's mammoth manufacturing facility at Ras Al Khaimah. In this issue, we are happy to showcase the completed site. The project has been completed in record time by Air Liquide's team and ElectroMech stood side by side with them and ensured that all the deliveries were spot on the target.

ElectroMech cranes are true workhorses and it is not uncommon to see our customers using these cranes for years on end with no hassles. Particularly, our customers in the infrastructure construction industry make the maximum use of our gantry cranes lying in their equipment bank by shifting them from one project site to another once a site is completed. ElectroMech, through its subsidiary Cranedge, aids such customers in shifting as well as carrying out any specific modifications depending on the requirements of the new site. Read about one such story we have covered in this issue.

ElectroMech is proud of its leadership position in the industrial overhead cranes market in India and its capabilities have been recognised by lots of awards and citations from the industry and the press. This issue covers two such awards which we received recently.

With the completion of supply of cranes for the prestigious order we had received from BMM Ispat, we have added one more feather to our cap. As can be seen from the story, the cranes that have been supplied live up to the globally accepted design and manufacturing standards.

It feels great to be a part of a mega project and especially be present at a key milestone ceremony celebrating the success of that project. We had the honour of being associated with one such project - the Mumbai water supply project under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM), which aims to supply the vital resource of water to the dynamic city of Mumbai. We were involved in supplying cranes that did the mucking as well as helped in putting together the Tunnel Boring Machine components underground. Hence, it was a great feeling to be a part of the tunnel completion ceremony.

In our quest for providing knowledge and educating our valuable customers about cranes and their technical intricacies as well as applications, we hold Knowledge Forums in different cities every year. We recently had two such Knowledge Forums in Mumbai and Chennai, which were attended by several customers. The entire event was a great success.

As always, I wish you all a happy reading and want to thank you all for your continued patronage of ElectroMech.

Tushar Mehendale
Managing Director

2 nos. 80MT, 32m span cranes working in tandem at the casting yard

Being a part of the ambitious Kochi

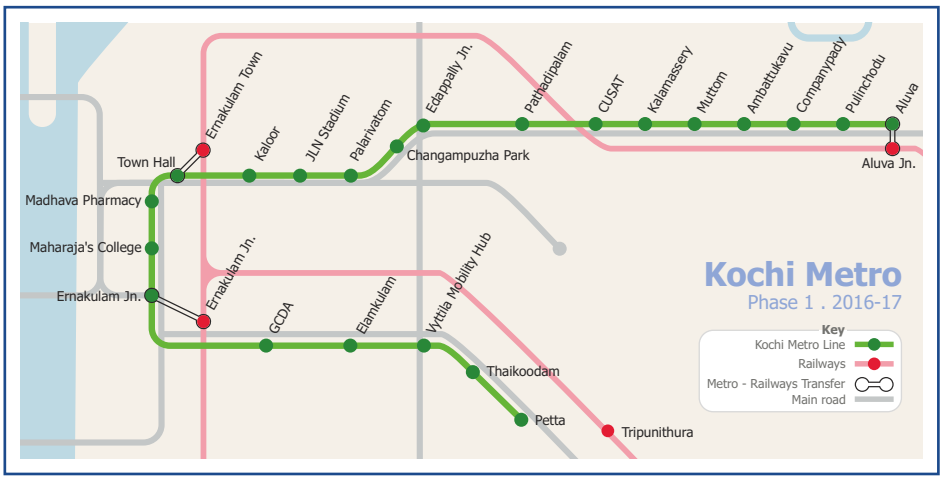
Rapid urbanisation in India has led to the need for rapid mass transportation systems in our expanding cities. Several metros and large cities in India are responding well to this demand by undertaking metro rail, BRTS and monorail projects. Designing such mass transportation around the existing infrastructure in the city and the limitations posed by narrow roads are challenging tasks indeed.

Metro rails with their enormous flexibility and speed are gaining fast popularity in urban India and several projects are underway in tier I and tier II cities. After cities like Mumbai, Delhi and Bangalore, Kochi is the first tier II city in India to start the execution of a metro rail project.

About Kochi

Kochi is a cosmopolitan city in Kerala with a bustling commercial port and the financial capital of the state, with a population of more than 2 million. More than 600 years ago Kochi merchants began trading in spices with the Arabs, Dutch, Phoenicians, Portuguese and Chinese. This helped Kochi to prosper and become the gateway to old India. Since 2000, Kochi has revitalised its economy with a focus on tourism, information technology and the port. Today, it is one of the major tourist destinations in India.

Giving speed to life in metros



About the project

The Kochi metro-rail is expected to be the fastest constructed metro rail project in the country. This INR 5182 crore project will consist of 22 stations from Aluva to Petta. The metro rail at Kochi will run on elevated viaduct tracks mounted on pre-stressed U/I concrete girders with pile/open foundations. The construction work of the 25 kilometre long elevated viaduct track for this project has been assigned to construction and infrastructure majors such as Larsen & Toubro, Soma and a joint venture of Era Infra and Chengdu Ranken. After a grand inauguration of its site in June 2013, Soma soon initiated the construction of the first metro station at Kaloor.

Challenges

In order to ensure quick and timely completion of the project, Soma set up a casting yard near Eloor in Kalamaserry to manufacture pier caps, pier bases, U beams and I beams. Soma was looking for different types of cranes to cover its 300m long manufacturing bays and handle the various precast segments. A detailed analysis of the handling requirements in this huge casting yard by ElectroMech revealed that in order to meet the timelines, in all 5 cranes would be needed. Four of these are needed in the casting yard and one for dispatch. All of them were expected to handle heavy loads, to be precise in operations and cover long bays. In addition, two cranes in a bay would often have to work in tandem. In order to cut down the project cost, Soma wanted to explore the possibility of modifying and reusing existing cranes from other completed project sites.

metro rail project

Being a part of the
ambitious Kochi metro rail project

1. Load testing of 50T, 28m span cranes
2. Handling of inner structures
3. Placing inner structures over outer structures for manufacturing beams
4. Handling of moulds while preparing concrete structures
5. Concrete pouring process for manufacturing beams and piers

Solution

Team ElectroMech welcomed this tough challenge and designed a solution which is both technically feasible and economically viable. Two pairs of cranes were required to handle voluminous and heavy girders, bars and rods used for manufacturing of concrete structural products required for viaducts and metro tracks. These cranes are also used to handle and store machinery, moulds, concrete girders, foundations and all other finished products.

In the first bay, two gantry cranes of 50MT with 28m span and 12m height of lift work in tandem. These were originally 50MT, 20m span cranes used by Soma at another project. The modification was carried out by our subsidiary company Cranedge, whose expertise in crane modifications has been proven and appreciated by several clients. In another bay, two more 80MT cranes modified from Soma's earlier Chennai metro project site work in tandem and handle a load of 160MT. These cranes efficiently and precisely handle and place huge inner moulds and steel bar skeletons inside outer moulds - an activity which demands high accuracy. The cranes also handle precast pier base caps in a similar process. The cranes were also modified by Cranedge from their original specification of 120MT with 22m span to 80MT with 32m span.

By way of ingeniously modifying the existing cranes, a substantial cost saving has been achieved at this project of Soma's.

Number of cranes: 4

	Cranes 1&2	Cranes 3&4
SWL	80MT	50MT
Span	32m	28m
Height of Lift	10m	12m
Application	Handling of moulds and finished products (U-beams, Pier caps, Pier bases)	Handling of moulds and finished products (I beams)
Speciality	Modification of existing cranes from 120MT, 22m span to 80MT, 32m span	Modification of existing cranes from 50MT, 20m span to 50MT, 28m span

Cranedge conducts comprehensive Crane Health Assessments

cranedge

upkeep • upgrade • upraise

Now a member of LEEA, UK

Cranedge is the services subsidiary of ElectroMech devoted to offering complete after-sales services to cranes of all brands, globally. In its short span of existence, Cranedge has earned a special reputation for itself through its rapid response, knowledgeable understanding of the customer's problems and provision of fast and perfect solutions in the form of its excellent service. It is a matter of great pride for us that Cranedge has recently been certified as a 'Development Member' of the **Lifting Equipment Engineers Association - LEEA of UK.**

The LEEA, founded in 1944 in Great Britain, is a leading, global representative body of all those involved in the lifting industry worldwide. The honourable members of LEEA work in every aspect of the lifting equipment industry, from design, manufacture, refurbishment, repair, hire, maintenance and use of lifting equipments. For over half a century, LEEA has been engaged in training personnel, setting standards, providing technical and legal advice and developing examination and licensing systems. LEEA represents its members in public and private bodies, government departments, and nationally and internationally recognised professional and technical institutions.

Cranedge is now a proud member of LEEA. Member companies of LEEA conform to very high standards in the aspects such as the knowledge, technical information and competence of the technical team. The members have to follow standard operations and maintenance methods; calibration methods of tools and tackles; maintain up-to-date records and documentation and adhere to high health and safety standards at site. Competence building, training, testing and certification of the technical team are mandatory.

Member companies of LEEA assure their customers of prompt, professional response from a knowledgeable team; clearly defined, multi-layered contact point information; high-quality work execution, consistent supply of quality, standard products from standard suppliers. Such companies are regarded as top-notch companies in the segment.

Being a member of LEEA, now Cranedge is also pledged to all these attributes and our customers will be benefitted from this high standard of service.

Glad to be a part of a critical infrastructure project

Tunnel completion ceremony at Unity-IVRCL site in Mumbai
IVRCL team visiting the ElectroMech stall at bC India

Unity - IVRCL JV celebrates completing the boring of 8 km long tunnel

As you know, Municipal Corporation of Greater Mumbai (MCGM) has planned an ambitious project of an underground tunnel for drinking water supply to its citizens. This is the first of its kind project in India worth INR2235 crore. As mentioned in earlier stories of EMPOWER, ElectroMech played a pivotal role in this project through its cranes supplied to Unity - IVRCL and Soma for tunnel mucking and TBM assembly.

Out of this entire ambitious project, the joint venture of Unity and IVRCL was awarded with a contract to complete a stretch of 15km from Gundovali to Bhandup. Recently, they have successfully completed the tunnelling of the first phase of this challenging contract. In this phase, the length of the tunnel is 8.3km with an inlet of depth of 108m and 11.8m diameter at Kapurbawdi. At the outlet near Bhandup, the diameter is 11.8m and the depth 125m. This is one of the deepest raw drinking water tunnels in Asia. The uniqueness of this project is that it used the highly advanced Tunnel Boring Machine which reduced the entire project execution period from 5 years to 18 months.

The underground boring and construction of 8.3km long tunnel at the depth of 100m was a high-risk project which demanded technical expertise to complete the job without any untoward incident. All facilities for safety, communications, lighting, ventilation, dewatering, wet/dry mucking and its disposal had been perfectly planned for the smooth completion of the project.

In this project, the astonishing excavation speed of the mammoth TBM had to be matched by suitable equipment for speedy removal of muck from 100m depth. High speed ElectroMech gantry cranes had been chosen as the most reliable equipment for the challenging wet/dry muck removal cycle. Two gantry cranes of 32MT capacity, 18.7m span, 140m lift and hoisting speed of 40m/min. were installed at two ends of the proposed tunnel. Also, safety features like load limiter with display, limit switches for motion restriction had been incorporated.

With the help of efficient muck removal using an ElectroMech gantry crane, Unity - IVRCL has set a new Indian record of drilling 57.38m length (finished diameter of 5.5m) of an underground tunnel in 24 hours. According to the statement by Unity Infra and IVRCL, they have also set a record by achieving 2 million safe man-hours and maintained zero lost time and accidents in a project of such type and size. The boring of the entire length of 8.3km was also completed in a record time of 180 days.

Team ElectroMech is proud to be a part of this achievement by providing a perfect solution and ensuring zero down time of the crane. This is a further testimony to our claim of providing the most pertinent solutions, which are safe and reliable.

Unity INFRAPROJECTS LIMITED | IVRCL Infrastructures & Projects Ltd.

Thinking differently gets rewarded

'Innovative 100' award

ElectroMech has always been a leader in innovation and has stepped forth to meet every handling challenge, be it in infrastructure projects or manufacturing establishments. The solutions provided by ElectroMech have always been unique and engineered to perfection. Over the years, these innovations have been appreciated across several factories and projects across India and the world. These projects and their success is the real award that ElectroMech takes pride in, but along the way recognition from other organisations goes a long way in encouraging us to take on more challenges.

32MT, 18.7m span, high-speed, high-lift tunnel mucking crane supplied to Unity-IVRCL JV

> We were the only company that was able to rise to the challenge of achieving a 325m height of lift for two hydroelectric power projects; HCC's Punatsanchhu project in Bhutan and Gammon's Parbati project in Himachal Pradesh.

About the award

'Innovative 100' is an award instituted by 9.9 Media to honour the most innovative companies in the mid-sized industry segment. This award is a representation of innovative achievements in technology, products and processes followed in the industry today and to be followed for years to come. It identifies and brings forward innovative mid-sized organisations and their leaders who, through their innovative actions, have introduced breakthrough changes in the Indian industry and possess a potential to revolutionise the business world.

ElectroMech was recognised and honoured with this award for the successful development of the Tunnel Mucking system. This material handling solution, specific to removing of overburden from tunnelling operations has been successful across several projects in India and abroad. We were the only company that was able to rise to the challenge of achieving a 325m height of lift for two hydroelectric power projects; HCC's Punatsanchhu project in Bhutan and Gammon's Parbati project in Himachal Pradesh.

About the award winning solution

The INR 2235 crore Mumbai water supply project under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) involved construction of a tunnel from Gundovli to Thane in the first phase which was awarded to Soma and from Thane to Bhandup in the second phase, which was awarded to a joint venture of Unity Infraprojects Ltd. & IVRCL Ltd.

For the first phase, for the tunnel from Gundovli till Kapurbavdi in Thane, Soma had decided to use a modern Tunnel Boring Machine (TBM). A TBM is a mammoth machine, 1 km in length, 100MT in weight and consisting of hundreds of components. ElectroMech was first posed with a challenge of lowering these components down the tunnel through the 100m shaft. This in itself was a challenge as the shaft was 10m in diameter, while the longest component of the TBM was 11m. This called for a special lifting attachment for the 120MT tunnel mucking crane which was designed and manufactured by ElectroMech to carry the components safely down the shaft to the tunnel.

The second challenge posed to ElectroMech was the installation of this mammoth machine 100m below the ground level. A 4x25MT triple girder crane was assembled 100m beneath the ground to successfully install the Tunnel Boring Machine and complete the project ingeniously.

ElectroMech's unique innovation in the form of the Tunnel Mucking systems has proven to be successful in various critical projects for rapid removal of overburden from tunnelling or shaft excavation. This award testifies that ElectroMech continues to align to its 'Innovations Approach' to satisfy customers' expectations. **Earlier, ElectroMech had also won the 'Manufacturing Today Award for Excellence in Innovation' for the same innovation.**

Completing installation of 29 cranes in record time at Air Liquide, UAE plant

Air Liquide is a reputed international company headquartered in France. It is a major player in production of gases for industry, health and environment. It offers advanced technologies for cold box manufacturing used in Air Separation Units. Recently, Air Liquide has set up a vast manufacturing plant in RAK Maritime City in UAE. The plant will manufacture machinery, fabricated metal products, structures, tanks, reservoirs, containers and related equipment needed for setting up gas manufacturing plants. For their requirements of quality cranes to integrate shop handling, Air Liquide approached ElectroMech FZE and placed an order for 29 cranes of different types. These cranes were recently supplied and commissioned in their UAE plant.

The Air Liquide facility at Ras Al Khaimah is spread over 36 acres and has 6 different shops. The 29 cranes of different types with varying capacities have to handle critical parts and components during various processes. At the raw material yard, 2 gantry cranes handle large and heavy steel plates during unloading, storage and shifting to the main plant. These plates further pass

Working together to create a record

Load testing of 150MT double girder crane at the Air Liquide facility in Ras Al-Khaimah, UAE

Project Achievement Certificate awarded to ElectroMech by Air Liquide

AIR LIQUIDE™

through processes such as cutting, bending, rolling, welding, fabrication and testing in different shops to form the end product. The gas plant machinery thus manufactured ultimately reaches the despatch bay. This end product, i.e. the entire gas plant machinery consists of 2 parts each, weighing about 300MT. Here, at the despatch bay, two cranes of 150MT capacity each, work in tandem to lift a load of 300MT. Two such parts of 300MT each are then assembled together forming a combined load of 600MT. This is the most challenging part of the project, apart from a few cranes, which are installed in two tier construction.

Responding to the urgency of the customer, ElectroMech team completed the entire erection and commissioning of all the 29 cranes in record time by working for almost 16 hours a day in temperatures as high as 45^0 Celsius. Full load trials of these cranes have been recently completed and the customer team has expressed its satisfaction while appreciating our effort to complete the job ahead of schedule.

Displaying the prowess of our solutions capability in a true blue steel plant

15MT, 28m span double girder crane installed in the quenching & cooling unit

About BMM Ispat Ltd.

BMM Ispat Ltd. is an INR 20 billion company, part of the renowned BMM group. Their plant at Danapur, Hospet, Karnataka is a true blue steel plant manufacturing high-quality steel products. As a part of a new brownfield project, the company is planning to expand the existing capacity, for which ElectroMech is supplying 13 cranes in the first phase. This facility is being constructed to expand the product range and to include a semi-automatic process, which will increase production.

BMM Ispat approached ElectroMech during the summer of 2012 and after a thorough evaluation of our proposal, placed an order for 13 cranes to be used at various stages of their manufacturing process. Through a detailed understanding of their workflow and several interactions between both the teams, cranes of most efficient design, effectively matching the application requirements were selected.

20/5MT, 34m span double girder crane installed in the despatch bay

The processes and challenges

BMM Ispat's plant is spread over a vast area of 50 acres (approx. 200,000sq.m.) and the entire manufacturing process is divided into four stages.

Steel melting shop

The first area is called the steel melting shop, which handles all the operations from the melting of raw material to forming of billets of desired shape and size. Here the metal is processed in the molten form and handled by ladles. The formed billets are to be rotated in 90° and are to be transferred on the idle rollers to take them to two different storage locations.

Furnace and rolling mills

The second phase of the entire process consists of a furnace and rolling mills and includes handling of long metal billets of an average length of 12m each. The process is initiated by passing the billets on to idle rollers installed besides the furnace. The rolling facility is spread over 200m length and the preheated billets are passed through various horizontal and vertical rolling mills to give them the desired shape. The dies of the presses are required to be changed frequently to suit the particular product to be rolled, which includes rolled angles, TMT bars, metal rods and I-beams.

Quenching and cooling

The third phase is the quenching and cooling process. This is a well-equipped and technologically advanced process cycle performed using a plant manufactured by Siemens, Italy. The products are rapidly cooled, which produces a harder material and prevents low temperature processes such as phase transformations in the material. Further cooling is then done and the product is then prepared to undergo the final finishing process.

Despatch area

The fourth and final phase includes the despatch of the finished products. The despatch yard is spread over 380m long and 50m wide area. This consists of parking bays for trucks and a railway track for loading on railway carriages. The despatch area has to store and handle long rods and beams. Rotating crabs are used to control the angle of long metal bars and other similar components in the despatch bay.

BMM Ispat was looking for a competent partner who could understand the challenges and design a complete material handling system to integrate the various processes. The objective was to ensure safe, quick and precise handling and appropriate manoeuvring during loading at the despatch bay.

Displaying the prowess of our solutions capability in a true blue steel plant

12.5MT, 34m span double girder crane with 360° rotating crab installed in the despatch bay

ElectroMech solutions

ElectroMech responded to BMM Ispat's challenge with some unique ideas. Detailed analysis, design iterations and trials resulted in an integrated solution that has proved to be fool-proof, achieving the intended task swiftly.

A total of 13 cranes were designed to handle the material through various processes right from the steel melting shop to the placement of bars and rods on railway carriages.

Steel melting shop

In the steel melting shop (SMS) where billets are formed, a total of 4 cranes with rotating trolleys assist in the manufacturing and storage of the billets. Two cranes of 20MT each covering a span of 32.8m and another two 20MT cranes with 27.2m span cover the manufacturing and storage of the billets before they are sent for further processing. Since these cranes are part of a process and in constant use, these are designed for class 4 duty. The ambient temperature in the steel melting shop is approximately 60^0 Celsius, requiring all the components of the crane to be able to withstand such high temperatures. Hence, a slewing wheel type of arrangement was selected to be able to work in this area. An air-conditioned cabin is also provided for the operator.

Furnace and rolling mills

The furnace is served by a 10MT crane with 22m span, which also has a rigorous initial application of installing the furnace and rollers. Once the installation of the furnace is completed, the crane will be used for replacing the rollers and for regular maintenance applications. Once the billets are transferred to the furnace for heat treatment purpose, they pass through idle rollers where they are re-heated. Two cranes serve this area; one crane of capacity 25/5MT with 28m span and another of 20/5MT capacity and 34m span. Since the dies have to be changed depending on the product to be manufactured, the 25/5MT crane is in constant use. All these cranes are designed for class 3 duty.

Quenching and cooling

Rolling is followed by the quenching and cooling of rolled items. The material to be handled in this stage is in the form of bundles and the same continues till the despatch of the final product. Here, two 15MT, 28m span, class 3, double girder cranes are installed to assist the installation of the machinery during plant set up stage and later on will be used to handle the material being processed at this bay.

Despatch

Once the processing of the material is complete, it moves towards the despatch bay. The despatch bay is 380m in length and is entirely covered by 3 nos. 12.5MT, 34m span, class 3 duty cranes. Like in the case of the steel melting shop cranes, these cranes also have 360° rotating crabs, however, the mechanism used here is a slewing bearing. This mechanism was narrowed down upon after many discussions between the design team of ElectroMech and BMM team. There were two types of rotating mechanisms that were finalised. One that operates with the help of gears and the other by using rails and wheels. The first one is used for continuous operations and hence the maintenance had to be kept to the lowest possible. The latter crane was operated under normal working conditions hence easy accessibility and simple mechanisms had to be provided. Since the despatch bay is in continuous operation, the cranes installed here are used rigorously for loading of finished components. The other two cranes will be used to load and unload materials onto despatch vehicles into the respective parking areas.

The client team and ElectroMech team worked closely to develop a suitable system and commission it in the stipulated time span. BMM Ispat management appreciated the efforts and complimented ElectroMech team for its customer-centric approach.

25/5MT, 28m span double girder crane installed in the rolling mill unit

Total no of cranes: 13

SWL (DG EOT)	Span	Height of Lift	Class of duty	Application
12.5MT (360° rotating crab)	34m	12m	III	Despatch bay
12.5MT (360° rotating crab)	34m	12m	III	Despatch bay
12.5MT (360° rotating crab)	34m	12m	III	Despatch bay
25/5MT	28m	16.5m	III	Mill bay (rolling mill)
20/5MT	34m	16.5m	III	Mill bay (rolling mill)
15MT	28m	16.5m	III	Mill bay (Quenching & cooling)
15MT	28m	16.5m	III	Mill bay (Quenching & cooling)
10MT	22.4m	16.5m	III	Furnace
20MT (360° rotating crab)	32.8m	11.5m	IV	SMS area (Billet storage bay)
20MT (360° rotating crab)	32.8m	11.5m	IV	SMS area (Billet storage bay)
20MT (360° rotating crab)	27.2m	11.5m	IV	SMS area (Billet storage bay)
20MT (360° rotating crab)	27.2m	11.5m	IV	SMS area (Billet storage bay)
25/5MT	18m	11.5m	III	Oxygen plant

Setting wheels of the automobile industry in motion

The automobile industry in India has witnessed a lot of action over the past decade. Almost every major international brand of repute assembles or manufacturers its vehicles in India. Several have also made India an export hub. Along with the large automotive names, an umpteen number of suppliers to these brands have also set up shop in India.

ElectroMech has a significant presence in this market through crane solutions provided to a number of companies in the automotive segment. Auto industries have to follow a specific standard and process during manufacturing. Hence, the cranes need to be very precisely designed and tailor-made to cater to the individual requirements.

The main application areas of EOT cranes in the automobile industry are:

- Handling press components
- Die handling through EOT cranes or transfer trolleys
- Chassis handling systems / cabin drop arrangements
- Vehicle interiors

Press components typically require double girder cranes ranging from 35MT-50MT for their handling. Precise positioning and smooth movement are required for this application, which are ensured by equipping these cranes with micro-speed facility in all motions.

For die handling, an additional auxiliary mechanism needs to be installed on the cranes. This is especially for the die tilting process for maintenance or changing of dies. Also, for die inter-bay transfers, we recommend die transfer trolleys - the safest way to handle dies for linear movements.

The 'cabin drop' requirement and chassis handling are a few other special applications. These are lighter applications (2MT capacity), but require tandem motions / synchronous motions of the hoists. Lifting of chassis is achieved with 2 hooks with adjustable hooking positions.

The ABUS HB system is an ideal system when it comes to lifting lighter components on an assembly line. These are tailor-made systems to suit the assembly line layout.

Considering the various options of crane systems in different load capacities available with ElectroMech, a number of leading automobile manufacturers and tier 1 & tier 2 suppliers trust us for their handling requirements. Here are a few of our satisfied customers.

50/20MT, 28.5m span Abus double girder crane at the Mahindra & Mahindra Ltd. press shop

Die tilting operation at Bajaj Auto Ltd., Aurangabad

Omnipresence a

Amtek Auto Ltd.

Amtek is a leading manufacturer of high precision iron and steel forgings and aluminum castings. They also manufacture various products from piston rods to precision engine components. ElectroMech has supplied more than 40 cranes for different applications across their various plants in India. ElectroMech cranes are applied under various conditions right from installing the machinery, loading and unloading of parts to maintenance of machinery.

20/10MT, 8.8m span semi-gantry and 35/10MT, 21.3m span double girder cranes at Bajaj Auto Ltd. for handling and tilting of dies

50/15MT, 34.5m span Abus double girder crane at Gestamp, Pune for stamping of vehicle doors

40MT, 23.5m span Abus double girder crane at Minda Corporation Ltd. Pune for manufacturing and handling of auto components

cross the automobile industry

AMW Motors Ltd.

AMW manufactures heavy vehicles required in mining, power, roads and highways and many infrastructural projects. They have a plant at Bhuj in Gujarat for manufacturing vehicles for a wide range of applications. ElectroMech has supplied 2 cranes to handle axles and in vehicle assembly area.

Apex Auto Ltd., Bangalore

The company manufactures components used in heavy construction machinery such as dozer frames, rotating frames, dozer blades, loader buckets, crawler frames, etc. The handling requirements of their plant are taken care of by 20 ElectroMech cranes. Their shop-floor is equipped with single girder cranes, double girder cranes and wall travelling cranes to cover the complete process of manufacturing.

Various ElectroMech & Abus cranes at Apex Auto Ltd., Bangalore for manufacturing and handling construction equipment parts

80MT transfer trolley at Mahindra & Mahindra Ltd.

20/10MT, 24m span Abus double girder crane at Hanyang Automotive India Pvt. Ltd., Chennai for manufacturing of vehicle door trims

Omnipresence across the auto

Automobile Corporation of Goa Ltd. (Jejuri)

ACGL is a leading bus body manufacturer with a plant at Jejuri near Pune. We have supplied 2 cranes, which are used in the pressing unit for handling of moulds. Here, the massive loads of dies of bus doors, front and rear body are to be handled, for which our cranes are used round the clock.

Bajaj Auto Ltd.

ElectroMech cranes are installed in the four wheeler manufacturing facility of Bajaj Auto at Waluj near Aurangabad. Three ElectroMech cranes are being used in the press shop for handling of dies of various components, transfer and tilting of dies as well as for the maintenance of machinery. Out of these three cranes, two double girder cranes are in continuous operation for loading dies on a series of press machines on the shop- floor and a semi gantry crane assists in the maintenance of dies and die-tilting mechanism.

FCC RICO Ltd.

FCC RICO Ltd. is a joint venture between FCC, Japan and Rico Auto Industries, India. This company is a supplier of clutches for Honda motorcycles. In their plant, 5 ElectroMech cranes are being used to handle the dies and machinery used for manufacturing clutches.

Force Motors Ltd.

At their Pithampura plant, one single girder EOT crane of 10MT is installed in the press shop for handling of dies.

40MT, 23.5m Abus double girder crane at Minda Corporation Ltd., Pune for manufacturing and handling of auto components

mobile industry

GE Stamp Ltd.

The Chakan plant of GE Stamp is involved in the stamping and welding of multiple parts used in an automobile. Their main production is of stampings for Volkswagen car doors. We have supplied 6 cranes for the efficient and precise handling of dies and press components.

Hero Motocorp Ltd.

For their factory at Neemrana, Rajasthan, we have supplied 2 cranes and a 5MT hoist, which is installed in the measurement and testing laboratory to handle the components being tested.

Honda Motorcycles & Scooters India Pvt. Ltd.

ElectroMech has supplied one crane at their factory in Alwar for loading and unloading of various parts of vehicles.

Mahindra & Mahindra Ltd.

At the factories of Mahindra in Kandivali and Chakan, total 11 cranes are supplied for handling of dies. 50/15MT Abus cranes supplied to the body shop, where stamping of vehicle doors is done, are of special design. Apart from this, several smaller cranes are being used on engine assembly line.

MAN FORCE TRUCKS Pvt. Ltd.

This company was in requirement of 2 cranes of 10MT each to handle chassis, vehicle body which were to be used for vehicle assembly. The main application of the cranes would involve the placing of body on vehicle chassis for heavy commercial vehicles. Hence, 2 cranes of 10MT each and a span of 12m with 9.9m height of lift were selected.

Maruti Suzuki India Ltd.

ElectroMech has supplied 3 cranes to the Gurgaon plant of Maruti Suzuki. The cranes are used in the testing facility for handling material testing instruments and parts to be tested. These cranes are also used in the training facility and electrical assembly area.

Renault-Nissan Automotive India Pvt. Ltd. (Chennai)

A 2MT single girder EOT Abus underslung crane is installed in the 3D room to handle dies and stampings of parts.

Roki Minda / Uno Minda (MINDA Group)

Minda Group is a leading auto ancillary group in India. Their joint ventures with various companies like Roki Corporation of Japan and Stoneridge Instruments of USA have helped them gain a strong position for automobile parts like driver instrument panel, automotive lighting, intake manifolds, etc. Our cranes installed in Minda are spread over various locations like Pune and Neemrana. We have supplied 6 cranes to this auto ancillary major for applications such as handling of dies during loading and unloading and maintenance purpose.

Tata Motors Ltd.

More than 100 ElectroMech cranes of different types are proving their worth on shop-floors of Tata Motors - the largest automobile manufacturer in India. Our cranes are installed in various plants in Pune, Lucknow, Pantnagar and Ahmedabad. They are being used for a variety of applications such as sub-assembly of multiple parts (chassis, axle), paint shop, assembly shop, stockyards, etc.

Volkswagen India Pvt. Ltd

We have supplied 2 jib cranes to their Chakan plant, which are used in measurement room and have a very specific application of handling multiple parts during measurement and quality check. Apart from this, hoists are used in the body shop to handle various parts during the assembly of car bodies.

Volvo India Pvt. Ltd.

Two cranes are supplied to Volvo India, Bangalore plant, which is one of the biggest manufacturers of buses in India. Our cranes are being used to handle bus bodies in the body shop.

With these existing credentials in the automobile industry, Team ElectroMech is all set to handle bigger challenges such as integrating handling on press shops, body shops, paint shops or even the entire automotive plant.

After globetrotting, proud to be a part of a project in our hometown

60/12MT, 28m span gantry crane for flyover construction

Gantry cranes for flyover construction in Pune

Gammon India is amongst the largest construction and infrastructure companies in India and ElectroMech has over a decade-long business relationship with the infrastructure giant. Gammon was recently awarded a project to construct a flyover in the Pimpri-Chinchwad area of Pune. This flyover will be from Yashopuram in Chinchwad and will connect to the auto-cluster across Pune-Mumbai highway.

Three ElectroMech cranes cover the handling requirements of this entire project. A 60/12MT gantry crane is used to construct the flyover. The main hook with an SWL of 60MT is used to lift the precast concrete blocks and place them precisely on the top of the pier. The 12MT auxiliary hook of this crane is used to install and dismantle all supporting structure for the flyover and the concrete structures. This also ensures that the workers have easy access to the entire structure of the flyover.

Apart from the main flyover construction work, two other cranes of SWL 15MT and 60/12MT are used in the precast yard in Chinchwad. These cranes ensure smooth handling of moulds and precast segments during manufacture and are also useful for loading of precast segments on trucks.

Crane details

- Capacity: 60/12MT / Span: 19.5m / Height of lift: 15m
- Capacity: 60/12MT / Span: 28m / Height of lift: 15m
- Capacity: 15MT / Span: 19.5m / Height of Lift: 12m

A Special mention is that these cranes were originally supplied to Gammon India in 2009 for their Godavari Bridge project. We are glad to see our cranes going strong for yet another infrastructure project!

ElectroMech-Gammon relationship

ElectroMech crane solutions are instrumental in the construction of several of Gammon's projects, including Parbati hydroelectric project, Godavari bridge, Munger project, Parvati bridge project, Delhi metro, Chennai metro, Kolkata metro and Bangalore metro projects, where Gammon is playing a major role in construction.

ElectroMech
Solutions | Service | Satisfaction

Sharing knowledge. Winning trust

ElectroMech kicked off its series of Knowledge Forums with the first edition in Mumbai at Hotel Leela on 25th April and the second in Chennai at ITC Grand Chola on 20th June. The Forums aim at building on the solutions offerings available from ElectroMech through an exchange of ideas with customers. The Forums brought to the forefront how ElectroMech solutions can add value to customers' projects by bringing the stakeholders on a common platform and communicating insights from both. The proceedings of the Forums were enjoyed and appreciated by the audience of 60+ delegates for Mumbai and 80+ delegates for Chennai, which included the company's key clients, partners, consultants and engineering media.

The clients for Mumbai figured reputed names such as Siemens, Tata Power, Pratibha Industries, HCC, Mott MacDonald, IVRCL, ESSAR Projects, Dodsal, Pan Gulf Technologies, Steiner India and many others. The Chennai forum was attended by esteemed clients like L&T Construction, L&T Hydrocarbons, BGR Energy Systems and Boilers, Hyundai Motors India Limited, VGN Infra, Caterpillar, Hanil Automotive India and many others.

The Knowledge Forums were addressed by Mr. Tushar Mehendale, Managing Director of ElectroMech, who gave the audience an insight into the company's operations and its focus areas for future growth as well as the innovative solutions over the years.

Mr. Arun Bishnoi, Director Sales, ZEIPL offered the clients a walk through of Zoomlion tower cranes in India and the 'Made for India' cranes developed by the joint venture especially for Indian markets.

Mr. Raj Shrivastav, CEO, Cranedge, elaborated upon the objective of the services subsidiary of ElectroMech, as it aims at catering to the void in the market for professional offerings in the after service of cranes.

The Knowledge Forums proved to be admirable successes as the attendees expressed their curious interest in ElectroMech and Cranedge. The clients showed an overwhelming response to these Forums and some of them shared their positive experiences with ElectroMech and Cranedge.

"We are happy to have partnered with ElectroMech as it delivered perfect solutions for our precise requirements, and also stood by us during our lean patch as we were affected by the global recession. We are thankful to ElectroMech."

- Gurudatt Pandit - DGM Procurement (Equipment), Hindustan Construction Company, Mumbai

"ElectroMech's valuable inputs for a project we were bidding for added value to our proposal - ultimately we won the contract. The timely and consistent support from ElectroMech Mumbai sales team vindicated its positioning as a solutions provider."

- Harshawardhan Deshpande - Chief Engineer, Civil & Structural, Mott MacDonald, Mumbai

"ElectroMech Sales team in Chennai has always supported us in our need. Whenever we require solutions for our handling requirements, the Chennai team is always present. It has always supported us to ensure a safe and secure working environment."

- J. Srinivasa Babu - General Manager (Operations), Prabha Auto Products, Chennai

"Cranedge has always been an excellent team for service and maintenance of our cranes. The team has done a brilliant job and has planned every detail well with our team to benefit our cranes."

- A. Julien Christopher Amirtharaj - Managing Director, Bay Forge Limited, Chennai

These reactions of the delegates represent the typical feelings of all members of the audience. Similar views were expressed by them during personal interactions of the management and the delegates.

ElectroMech intends to hold more such sessions of the Forum in the future to achieve greater customer satisfaction.

Mr. Tushar Mehendale addressing the delegates of the ElectroMech Knowledge Forum at The Leela, Mumbai

Team ElectroMech receiving the 'Manufacturing Today' Award at the Manufacturing Today Conference & Awards, 2013

ONCE AGAIN!
Excellence in Innovation

Honoured with coveted Manufacturing Today Award for Innovation

The prime reason for ElectroMech being synonymous today with 'solutions' is the obsession of our team members for innovation. Our customers have repeatedly vindicated this by way of their appreciation and repeat orders. To enhance this joy of appreciation, this year again ElectroMech has been honoured with the Manufacturing Today 'Excellence in Innovation' award. This award is instituted by 'Manufacturing Today' magazine, which is a part of the renowned ITP Publications group.

We received this award for the indigenous development of a Single Failure Proof Crane (SFP) for Nuclear Power Corporation of India Ltd. (NPCIL). SFP cranes are installed at extremely critical locations in a nuclear power plant such as the reactor dome directly above the reactor and the spent fuel storage bay. Clearly, safety is of utmost importance in these areas. To avoid any accidents, the crane is provided with redundant safety mechanisms to ensure safety. This is achieved through a dual wire rope and drum arrangement as well as redundant mechanisms for critical systems.

Award winning Single Failure Proof Crane designed and manufactured by ElectroMech for Nuclear Power Corporation of India Ltd.

While working on this project, it was not only the application which was critical, but the stringent design specifications and highly demanding requirements of the user were a challenge to our design team. After evaluating several options, a double-decker crane where two rope drum arrangements are placed one above the other, was selected. Such an arrangement not only saved space, but also provided larger hook approach areas. All these requirement challenges and our innovative solution were taken into consideration by the jury team while selecting us for the award.

While commenting on the award, Mr. Tushar Mehendale, Managing Director said, "Innovation is a tradition and a way of life at ElectroMech. It not only keeps us ahead of competition, but also gives our team immense satisfaction of accomplishing the impossible. Our biggest awards come from our customers when they repeatedly approach us for new requirements and such awards further encourage our team to excel in what they are doing."

Team ZEIPL at EXCON 2013

ZEIPL tower crane TC 5013-5 displayed at EXCON 2013, BIEC, Bangalore

Participation in EXCON at Bangalore

EXCON 2013, organised by Confederation of Indian Industry (CII) was one of the biggest construction industry events for South Asia in 2013. The exhibition was organised at BIEC, Bangalore from November 20 - 24, 2013 witnessed over 35000 business visitors.

The TC5013-5, a tower crane developed by ZEIPL specially to benefit the Indian construction industry was on display at our stall. This crane has a capacity of 5t and jib length of 50m. EXCON 2013 was a perfect platform to display 'Made for India' cranes. Zoomlion ElectroMech also introduced its passenger hoist to the Indian market for the first time. It is a 2T capacity Single Cage Hoist with advanced features like wireless communication, Programmable Logic Controller, etc. Another attraction at the stall, besides the tower crane and passenger hoist, was the display of 1.2m x 1.2m mast specially designed for the Indian market.

The stall witnessed the presence of many existing customers and new customers who are mainly involved in the construction of residential and infrastructure projects.

Nurturing talent while contributing to the progress of engineering industry

Mr. Vilas Kakade addressing Thermax Graduate Engineer Trainees at the ElectroMech University

Training for Graduate Engineer Trainees from Thermax Ltd.

Team ElectroMech is always eager to share its knowledge with young engineers. As a part of this enthusiastic effort, a training programme for 15 Graduate Engineer Trainees (GETs) from Thermax was organised at ElectroMech in December 2013. The main objective of this training was to familiarise the GETs with cranes as well as expose them to the best manufacturing processes prevailing in the industry.

The training began with an introductory speech by Mr. AVR Murty, CEO, ElectroMech. This session consisted of an introduction to ElectroMech and its solutions offerings. This was followed by an introduction of the trainees to the basic nomenclatures and technical concepts of a crane and the various electro-mechanical components used in the design and manufacturing of a crane by Mr. Akash Kulkarni, Asst. Manager - Design and Mr. Ajit Bhosale, General Manager - QA, explained in detail the manufacturing processes at ElectroMech and the quality aspects involved in the manufacturing of cranes. This session involved information on various processes followed during the manufacturing of cranes and the quality and safety norms followed in our manufacturing facility. Mr. Raj Shrivastav, CEO - Cranedge, explained the maintenance of cranes and the importance of trained operators in an organisation.

The ElectroMech sales team played an important role in this training as the trainees were informed about various technical parameters for the selection of a crane. Mr. Vilas Kakade, Zonal Manager Sales, gave the trainees an understanding of the present crane market and took them through the steps of processing an order for a new crane. He was assisted by Mr. Onkar Rasal, Asst. Manager Sales - Pune region. Both of them have been mainly responsible for maintaining a successful business relationship with Thermax and for organising this comprehensive training.

The important aspect of this training was the exposure it offered to the trainees to the latest trends in manufacturing and the safety norms followed on our shop-floor.

The training programme proved to be a very enriching experience for the trainees. They were exposed to the best manufacturing processes in the early stage of their engineering career. The programme also strengthened the bond between ElectroMech and Thermax.

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ElectroMech
Solutions | Service | Satisfaction

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