



AN ISO 9001:2008 COMPANY



IS : 9537



Part (II)



- GALVANIZED CONDUITS
- STEEL CONDUITS



Part (II)

Embossed after every metre

About The Company

B.E.C. Industries, as known as the Leader of Indian Conduits is the largest domestic manufacturer of ISI marked (IS: 9537 (Part II)/1981) rigid stove enamelled steel conduit pipes and galvanized steel conduit pipes. B.E.C. Industries was founded by the Late Mr. Balmukund Mehra in 1951. The family business was taken over by his son, Late Mr. Krishan Kumar Mehra and his grandsons Mr. Ajay Mehra and Mr. Anil Mehra. Competing with the pace of the growth in the industry and the construction sector, the duo have maintained and improved the quality standards of their products. Today, B.E.C. Industries is an ISO 9001:2008 organisation and is the most reliable Indian organisation for providing the safest conduit pipes for electric installations. We have also received the CE mark approval for all our products. CE stands for "Conformité Européene", which literally means "European Conformity". CE marking on a product is a declaration that the product complies with the essential requirements of the relevant European health, safety and environmental protection legislation. The fourth generation is very fortunate to take up the responsibility to maintain these traditions. They are looking for improvements in the processes being followed and the product being delivered.

The Certificates

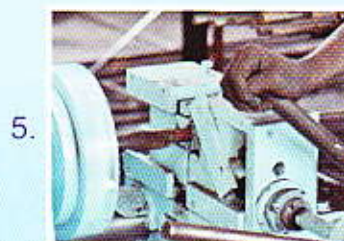


The Process

Precision welded ERW (Electric Resistance Welded) conduit pipes are manufactured by the High Frequency process on an Automatic Plant, imported from England. Mild steel strips which are used as raw materials are fed into the rolling mill wherein our trademark B.E.C. and ISI are embossed at one metre intervals. Thereafter formation into pipes, welding, cooling, sizing and cutting into required length is done by an automatic process. The plant is equipped with Servo Control which ensures smooth and uniform welding. According to the specification number IS: 9537 (PART II)/1981, the most suited length for a conduit pipe is in the range 3.0 metres to 5.0 metres. Threading is done at both ends and one coupler attached to one end. Threading lengths are in accordance with ISI standards. These steel tubes are then dipped in stove enamelled black paint or any other colour as per the customer's requirements. Finally the painted pipes are labelled with stickers mentioning the B.E.C. trademark, the ISI mark and the size of outside diameter. The Pipes are then covered with plastic tube and packed with hessian cloth.

However, galvanizing for conduits is done by Hot Dip Galvanizing process heated with oil fired furnace under controlled temperatures. The galvanizing process consists of three main processes: Surface preparation, Galvanizing and Inspection. The steel pipes are degreased using a hot alkaline solution; then dilute solutions of sulphuric acid remove surface rust. Fluxing follows next, wherein the pipes are immersed in liquid flux (zinc ammonium chloride solution) to remove oxides and to prevent oxidation prior to dipping into the bath of molten zinc. In the galvanizing process, steel pipes are immersed in a bath of molten zinc between 815-850 F (435-455 C). During galvanizing, the zinc metallurgically bonds to the steel, creating a series of highly abrasion-resistant zinc-iron alloy layers. After the pipes are withdrawn from the galvanizing bath, excess zinc is removed by draining or vibrating. Coating-thickness and surface-condition inspections complete the process. After the galvanizing process, the galvanized tubes are threaded, followed by labelling and packing.

Since the quality of conduits manufactured is of prime importance at B.E.C., each batch of pipes undergoes through various tests, right from the inspection of raw material to the inspection of final goods.



Product Description

ISI marked black stove enamelled Steel Conduit Pipes and Galvanized Steel Conduit Pipes are manufactured as per the following IS: 9537 (Part II)/1981 dimensions.

Nominal Size of Conduit (in mm)	Outside Diameter (in mm)	Tolerance in outside Diameter (in mm)	Wall thickness of Conduit Pipes (in mm)
20	20	-0.3	1.4 to 1.8
25	25	-0.4	1.4 to 1.8
32	32	-0.4	1.4 to 1.8
40	40	-0.4	1.6 to 2.2
50	50	-0.5	1.6 to 2.2



B.E.C. also manufactures conduit pipes in various other colours such as Red, Green, Yellow, Blue, White or any colour as per the requirement. In addition to this, GI conduits with epoxy coating are also manufactured for extra heavy protection for specific job requirements.

The Testing

"QUALITY is not AN ACT but is a HABIT" ... Mr. Anil Mehra

At B.E.C., the quality control engineer and his team, inspect and test the raw materials, goods in process and the finished goods on a daily basis. The following tests are conducted.

NAME OF THE TEST		METHODOLOGY & REASONING
Diameter and Wall Thickness Measurements		<ul style="list-style-type: none"> To maintain the standard sizes with minimum variation.
Compression Testing Machine		<ul style="list-style-type: none"> To check the mechanical strength of the pipe.
Bend Test and Ball Test		<ul style="list-style-type: none"> To check the quality of welding as well as the mechanical strength of the pipe. To check the ease of flow of the wire within the pipe.
Screw Thread Test		<ul style="list-style-type: none"> To check the length of the thread as well as the pitch so that pipes can be joined with each other easily.
External Influence (Protective Coating)		<ul style="list-style-type: none"> To check the proper adhesion of paint with respect to steel for medium protection against corrosion in Copper Sulphate solution as per IS:9537(Part II)/1981. To check whether the quality of zinc coating is in accordance with the ISI standard for heavy protection. Preece test as per IS:2633/1986 is conducted to check the uniformity of zinc coating. Also, the minimum mass of zinc coating as per IS:4736/1986 should be 360gm/m²
Durability of Marking		<ul style="list-style-type: none"> By rubbing process.

The Application

B.E.C. conduit pipes are designed for electrical piping systems used for protection and routing of electrical wiring. B.E.C. conduit pipes can be used under all atmospheric conditions for all occupancies for concealed exposed wiring, in Thermal and Gas Plants, for high volume installation, for buried underground and for wet saline tracks. At present, B.E.C. pipes are being used in all leading hotels, hospitals, domestic and international airports, sports stadia, shopping malls, government and private thermal power plants in India.



Delhi Metro Rail Corporation (DMRC)



Hotel Maurya Sheraton, New Delhi



DLF Emporio Mall



Indira Gandhi International Airport

Why

- Unmatched Quality at competitive prices.
- Creating maximum value for customers.
- Employee welfare at the core.
- Prompt Execution of Orders.

Dealership NETWORK

