



**MAKE SAFETY YOUR PRIORITY**



*Building Infrastructure for last 40 years*

**S.R. Engineering Corporation**

# History of Scaffolding

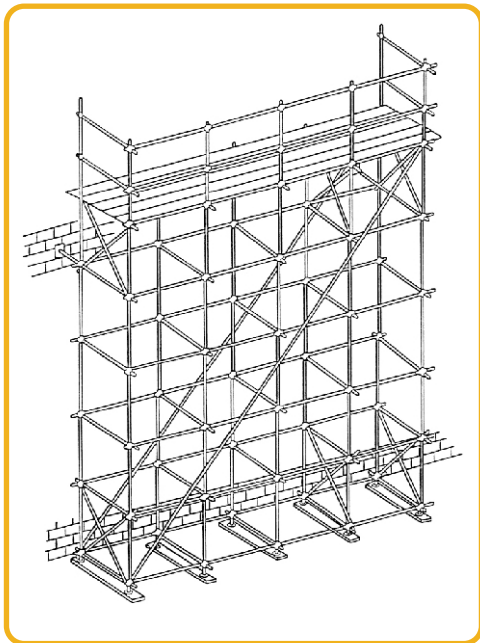
Have you ever seen a film about the Egyptians well if they are building something then they have some sort of primitive scaffolding, it might be some planking system but it worked and the wonders of the world are proof that they achieved what they wanted to achieved.

Noteworthy, that the “Pyramids” and “Great Wall of China” was build using scaffolds.

If you look up the word scaffolding, it says

- 1.A raised wooden framework or platform.
- 2.To provide or support with a raised framework or platform.
- 3.To place on a raised framework or platform.

So simply, if it's built to give access to, then it's a scaffold!



So how did we get from wood to metal in scaffolding?

Well as scaffolding with wood was unregulated and with no standardization therefore two different companies would erect the scaffold differently, there was a need to introduce a system that was safe and uniformed.

In 1906 Daniel Palmer-Jones and his brother David Henry Jones started the Patent Rapid scaffold tie company and in 1919 introduced the scaffixer, this was a set of fixings that would hold either wooden or metal pieces together with a much higher yield than rope.

In 1922 the company became SGB LTD and in 1923 started using 2" water pipes instead of wooden poles. This introduction was to standardize the industry as now used with the scaffixer; they were able to measure out the scaffolding and get it level and plum as the tubes were the same size and the fixings were the same. The new introduction of steel over wood meant that as the building became higher the scaffolding became more suited and stronger, with the introduction of the diagonal bracing they became able to extend upwards with greater stability.

Like any industry changes with working regulations have shaped the way the scaffolding has moved forward, today the access world is highly regulated and it's now a criminal offence to work in a manner that compromises your own safety or the safety of others.

Accidents today in the scaffolding world still happen but with time and lessens learned from the last they should be a thing of the past.

# COMPANY PROFILE



**Vision:** To develop Infrastructure through Innovation.

**Mission:** To be a global player in the engineering services, by delivering world-class solutions through reinforcing worldwide strategic alliances.

## About Our Company

A firm established on 06-12-1973, by Sri Sreeram Sharma, dealing with MS Pipes, GI Pipes and structural material in Kolkata. Started with trading business in Kolkata with a wide range of products and versatile range of customers and clients.

In the 90's the firm was taken over by his able son Mr. Suresh Kumar Sharma, who has driven its business in the neighbouring cities and states away from Kolkata. Presently it is a partnership firm with 3 partners who deliver their best to establish the name and fame of the company in eastern India, and soon the products will reach every corner of the nation.

## Partners

### Mr. Suresh Kumar Sharma

The oldest partner of the company. His experience in the industry is over 30 years, and it has really helped the company over a period of time. He is technical and pragmatic in his approach, which helps the company to have an edge over its competitors. The company share his vision as we move forward in the 5th decade of our existence.

### Mr. Pankaj Sharma

MBA - Entrepreneurship from Mumbai. He has helped the company to do business beyond West Bengal. At present, the company is also doing business in the International market. His exposure and innovation has helped the company to remain as one of the preferred business house in the eastern India market.

### Mrs. Divya Sharma

A graduate with an exposure in administrative activities of the firm. She is monitoring the performance and maintains the business ratio to optimize the financial flow of the company.

## Vertical Cuplock

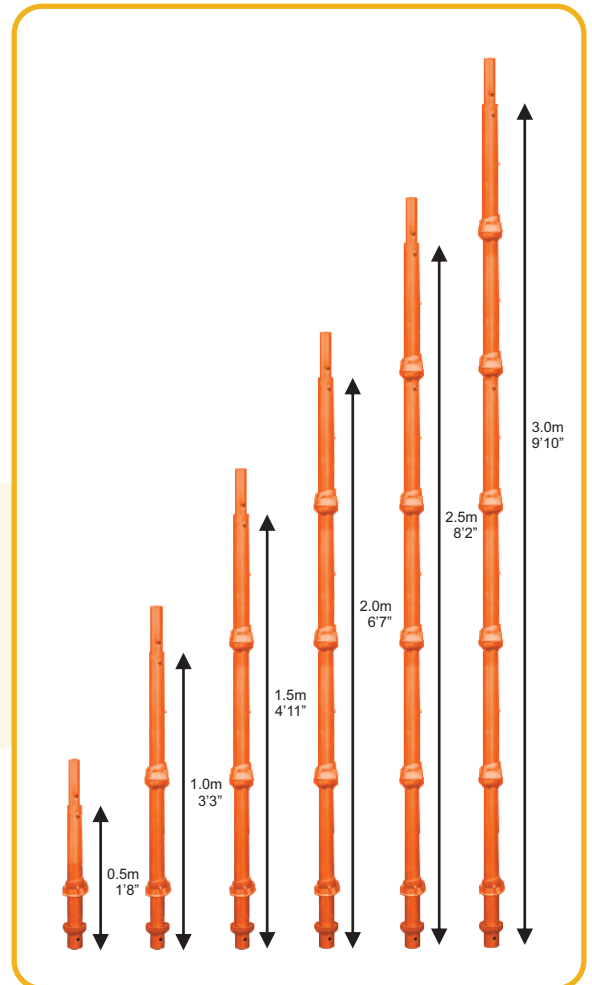
Cuplock spigotted standard/vertical is basically used in scaffolding work and also acts as a base structure for Formwork strengthening applications. The cup joints are at every 500mm intervals. The inbuilt movable top cups are made for rough site handling. The welded bottom cups are made from high grade steel. Integral spigots are 150mm long and are provided at the top of each standard for making upright connections. The base and the spigots of every standard have 16mm diameter holes which enables use of locking pins to secure the standards wherever necessary.

Our Vertical Cuplock Scaffolding System that is manufactured from the finest grade raw materials. This Vertical Cuplock Scaffolding System is open at both ends and is highly appreciated in the market owing to its high durability and tensile strength. While manufacturing these lock systems, our professionals make sure to use superior quality ERW steel tubes and follow the established guidelines of the industry. The captive mobile caps are manufactured by using malleable cast-iron and the welded bottom caps are pressed from finest quality steel. To ensure safe and versatile application of these lock systems, the node point connection set at 500/ 1000 mm. Before the final delivery, these products are stringently examined on different parameters to ensure their flawlessness.

**Size available:** 3.000 m, 2.500 m, 2.000 m, 1.500 m, 1.000 m, 0.500 m.

**Some of the attributes of these products are mentioned below:**

- Cap Joint:** Gives rigid connection between vertical and horizontal member
- Cap Action:**
  - Allows faster erection
  - Allows 4 horizontals to be fixed or released in a single operation
  - Easy fixing of top cap, only hammer required.
  - No small and loose parts, looses reduced.
  - Removable spigot. Gives greater flexibility of use
  - Greater flexibility



Length (m)	Painted	Self Finish
0.500	2.450	2.350
1.000	4.900	4.700
1.500	7.350	7.100
2.000	9.800	9.400
2.500	12.250	11.900
3.000	14.700	14.200

## Horizontal Ledger

The Cuplock transom is produced using conjoint twin structural angles fixed together and have a drop forged blade attached to each end. The 2.44m cuplock transom incorporates additional web member welded below the flange section for increased strength. The forged blades of the transom are fitted into the bottom cup and are secured using the top cup. The outside standing bottom leg angles sustain the steel planks in confined manner. The Cuplock transom is available in various lengths to suit scaffolding and Formwork applications. Horizontal Cuplock System, This is produced with high grade tube as per site standards on customer requirement and drawing. It has forged steel blades at both the ends with accurate size to fit into the verticals. Every stage of manufacturing is strictly monitored by our experts, in order to develop premium quality product. These cup lock systems are tested on variegated parameters of quality and then forwarded for the end dispatch.



### Features:

- Locked in place by corresponding upper cups
- Ledgers are available in various sizes to provide the desired grid dimension of the work
- Ledgers are made using 48.3mm O.D. tube with forged steel blades at the ends
- The blades are placed into the bottom cups of the vertical
- Rust resistance

### Available size:

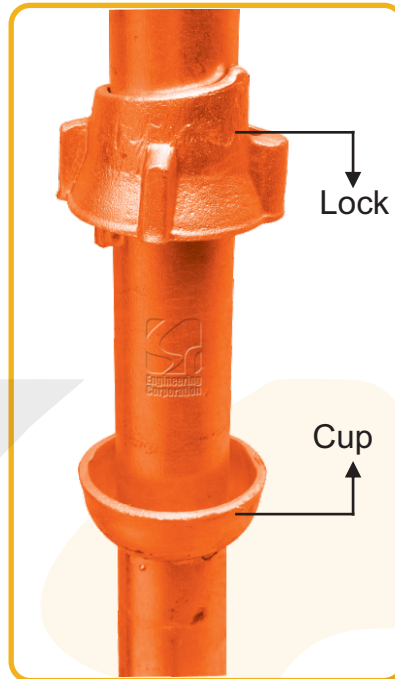
0.600 m, 0.900 m, 1.000 m, 1.200 m, 1.300 m, 1.600 m, 1.800 m, 2.500 m.

Length (m)	Painted	Self Finish
0.600	2.370	2.300
0.900	3.404	3.300
1.000	3.750	3.650
1.200	4.430	4.300
1.300	4.850	4.700
1.600	5.870	5.700
1.800	6.600	6.400
2.500	8.900	8.650

# PRODUCTS

## Cup Lock

The offered range of top cup 3 lugs is designed using premium grade malleable iron casting, procured from trustworthy vendors of the market. It is very durable, high performance and wide functionality.



With an immense experience and a competent team of professionals. The offered range of bottom cups is manufactured utilizing high grade carbon, stainless & alloy steel, sourced from trustworthy vendors of the market. Our proficient quality personnel ensure to check the entire range of bottom cups on different parameters to ensure its adherence with the international quality norms and standards.

## Base Plate

We are one of the most renowned names in the industry, involving in the manufacturing of Base Plates, these plates comes in different shapes and sizes in the market as per the demands of the clientele. These products are available in the market in various customization as per the demands of the clients.



### **Features:**

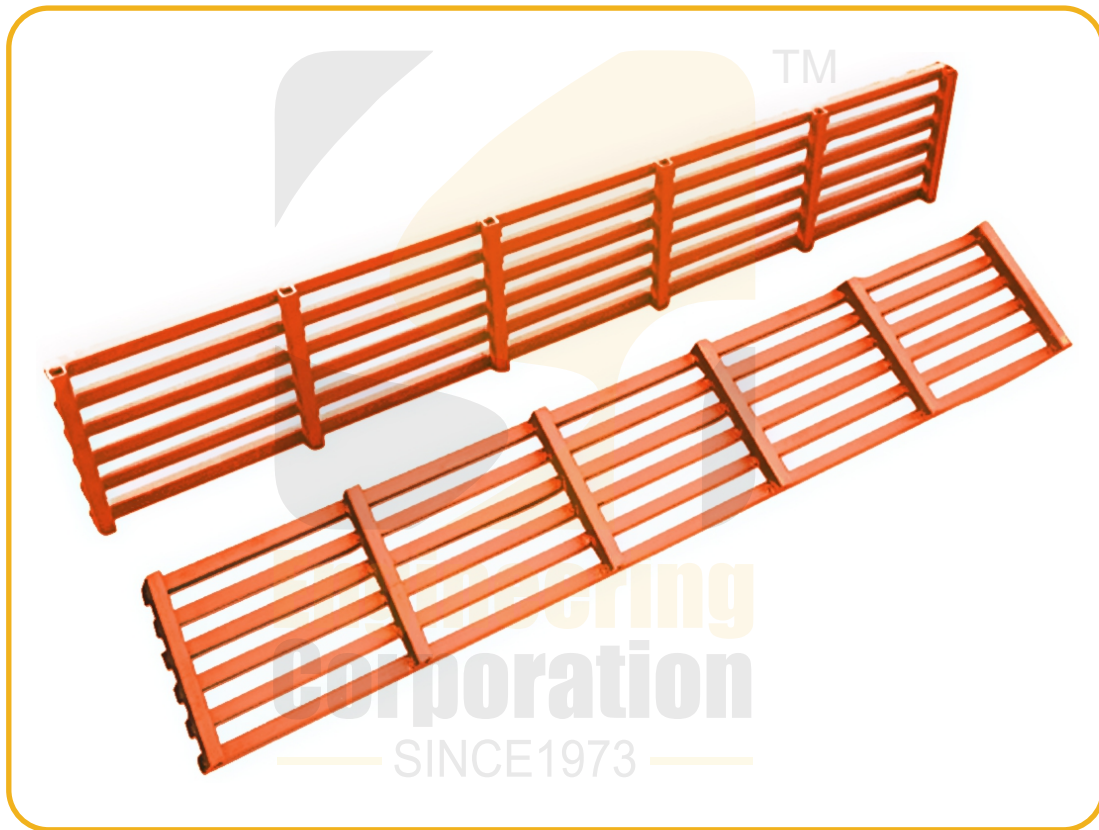
- High load bearing capacity
- Resistant to corrosion
- Accurately manufactured
- Weather proof finish



Provided to the clients is a high quality range of Base Plates to the esteemed customers. The Base Plates is a true blend of traditional scaffolding coupled with high tensile tube.

## Scaffolding Floor Form

Offered by us is high quality Scaffolding Floor Form to the esteemed customers at highly competitive prices. The Scaffolding Floor Form is manufactured by a team of highly experienced & talented professionals. Moreover, these products are widely used in the construction of buildings, bridges and others. It is made up of 20 x 20 square pipes in a welded platform to support heavy weight to cross over for workman & materials and we maintain the standard structured gap so that the workable water, cement mix or other solid waste do not remain on the floor form and thus the durability and sustainability of the form retains for long duration.



### **Other details are as follows:**

- Offered at industry prices
- Customization facility available

# PRODUCTS

## Swivel (Moveable) Clamp

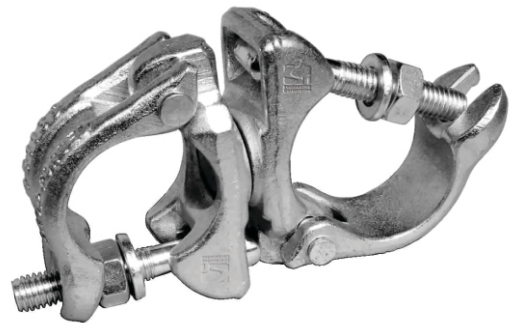
We offer our clients Pressed Swivel Couplers that join two scaffold tubes at any angle to provide a ledger brace, faced or similar bracing. Mild steel is used in manufacturing the swivel couplers to add to their strength and durability. Further, these are fine in finish, corrosion resistant and are designed as per prevailing quality standards. Additionally, this Pressed Swivel Coupler is also used as ledgers or props for diagonal bracings. These clamps also available in Galvanized form to increase durability and multiple use.

We are counted amongst the eminent names in industry involving in the manufacturing of Swivel Couplers; our products are processed by the experts of the company using the best quality product with the help of advanced technology and well equipped machinery. These products are available in various customized form as per the requirements of the clients at reasonable rates.

Understanding the needs of the patrons, we are also engaged in manufacturing and supplying Swivel Coupler (50 mm). Our professionals make use of advanced machines and quality-approved material to manufacture these swivel couplers offered by us. Manufactured in tandem with industry standards, these couplers are tested on different parameters of quality and then delivered to the customers.

**Some of the attributes of these couplers are given below:**

- Durability
- Rugged construction
- Accurate dimensions



For Tube OD (mm)	Weight (kg)
48.300	0.900

## Fixed (Right Angle) Clamp

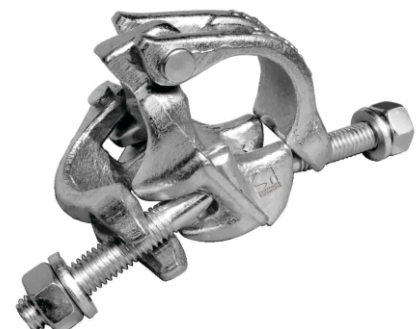
Pressed Double Coupler are used to connect two scaffolds at right angles. These critical components reinforce scaffold structure and can bear heavy load to disallow slip & distortion of the structure. The design is supported by a strong one piece body with T-bolts and flaps that can be easily removed for replacement or maintenance. These clamps also are in demand in galvanized form.

Our organization is counted among the most distinguished manufacturers and suppliers of Dual Right Angle Coupler. The range of dual couplers offered by us is manufactured in tandem with international standards and so for the reason highly appreciated by the clients all over. Also, our experts examine these couplers at every stage of production, with an aim to maintain higher standards of quality and remove flaws, if any.

**Available in various specifications as well as in custom-built range, these couplers are known for their following attributes:**

- Durability
- Dimensional accuracy
- Rust resistance
- Robustness

For Tube OD (mm)	Weight (kg)
48.300	0.900



## Spigot Pin

We make available superior quality Spigot Pin that has a wide application in various industries. Our range of Spigot Pin is used when necessary Verticals are connected end to end. Spigot Pin is bolted to the lower vertical using in the slab support when loaded. Supported by our highly experienced professionals, we have emerged as an affluent manufacturer and supplier of Spigot Pin. Which is made out from forging with bolt and nut accessories. Normally NB 32mm mild steel ERW Pipes are used for the purpose with appropriate holes at specified accuracy to be able to get it bolted at the vertical. It is connected internally and to allow ease of joining. Which is used in building construction and related industries. Which are fabricated using fine quality raw material. We are highly appreciated by their corrosion resistant, high tensile strength, long service life and fine finish, these pins are even galvanized on customer requirements. We offer these to our esteemed client's at most economical prices.



## PROPS (Post Shore) (Telescopic)

We are instrumental in offering a high quality Telescopic Steel Props to the customers, as per their demands. It is made by Pipes with OD: 60mm, tube ID: 48.3 and thickness: 3mm. The size is adjustable in the range of 2.50 Mtrs to 4 Mtrs. These products can be used in all types of building construction, thus, are widely demanded in the market. Moreover, these are ideal to be used in the applications where there is a need of adjustable vertical load bearing member.



**These products are ideal supporting device for the following:**

- Formwork to slabs
- Formwork to beams
- Formwork to walls
- Formwork to columns

**Size:**

- 2.00 Mtrs to 3.50 Mtrs
- 2.50 Mtrs to 4.00 Mtrs
- 3.00 Mtrs to 4.50 Mtrs

Close Ht./Open Ht. (mtr.)	Weight (kg)
2.00/3.50	15.300
2.50/4.00	16.800
3.00/4.50	18.300

# PRODUCTS

## Intermediate Transom

This is a kind of support on a frame, having “U” clamps at both ends to reduce the load factor on the entire square of scaffolding. It retains the pull from both ends so that the structure gets an extra edge on support and further load gets disbursed keeping the structure erect and strong. It is commonly used on very high projects.



Length (m)	Painted	Self Finish
0.565	4.000	3.900
0.795	4.850	4.700
1.200	6.280	6.100
1.300	6.590	6.400
1.800	8.340	8.100
2.500	10.900	10.600

## U-Jack (Universal Jack)

There are two types of U jacks commonly used in standard format.

- 1.Width: 174mm x Height: 94mm x Distance: 150mm x Thickness: 6mm
- 2.Width: 215mm x Height: 120mm x Distance: 100mm x Thickness: 10mm

Commonly it is made on OD: 38mm tube and is fully threaded with pin holes at both the ends to hold the U-Jacks, Base plates etc. for clamping or holding purpose.

### U-jack Dimensions

Type	Size (mm) (WxHxDxT)
A	174x94x150x6
B	215x120x100x10

### Adjustable U-Head Jack

Tube OD (mm)	TL/AL (mtr.)	Type A	Type B
38 x 4	0.450/0.300	4.495	5.380
38 x 4	0.550/0.400	4.830	5.715
38 x 4	0.650/0.500	5.165	6.050
38 x 4	0.750/0.600	5.500	6.385



We are leading supplier of Galvanised & Black Steel Tubes & Steel Pipes. With decades of experience, we have carved a niche for ourselves in the Tube / Pipe industry.

With an objective to be recognized as one of India's leading supplier of ERW Galvanised and Black Steel Tubes and Steel Pipes. Our consistent focus and commitment enables us to provide our clients with an ever-increasing selection of products that conform to the highest standards of precision and reliability, consistency of pattern and lasting value. We have been striving to give quality steel tubes & pipes.

**We offer a variety of products that are reliable and find diverse applications in various industries. Our main products are:**

- Galvanized Steel Pipes / Tubes
- M.S. ERW Black Pipes / Tubes
- M. S. Square Pipes / Tubes
- M.S. Rectangular Pipes / Tubes
- Scaffolding Pipes / Tubes
- Steel Conduit Pipes

ERW Black & Galvanised Steel Pipes are used as water steel pipes, gas air steel pipes and steam conforming to IS: 1239 (Pt I) – 1990 Equivalent to BS- 1387/1995



### **Galvanized Pipes**

15mm NB to 300 NB (1/2" to 12") in various national & international specifications.

### **Black Pipes**

15mm NB to 300mm NB (1/2" to 12") in various national & international specifications.

### **Rectangles, Squares**

From 25mm x 25mm to 150 mm x 150mm

### GRADES

Conforming to Stringent Specifications

#### National Standards

I) IS : 1239	For ordinary use in water, gas & air, lines.
ii) IS : 3589	Grade 330 & 410 for water, gas & sewerage purposes.
iii) IS : 4270	Steel Tubes for water wells ( casing pipes )
iv) IS : 1161	Grade YST210 and 240 for structural purposes.
v) IS : 3601	Steel Tubes for mechanical & general engineering purposes.
vi) IS : 9295	For idlers & conveyors.

#### International Standards

##### British

BS : 1387	For ordinary use in water gas lines.
BS : 1775	For mechanical, structural & general engineering purposes.
BS : 1139	Tubes for metal scaffolding.

##### American

ASTM A 53	For ordinary use in water, steam, gas & air, lines.
ASTM A 120	For ordinary use in agriculture & air, lines.

##### European

En – For use in water, gas and air flow

##### Japanese

JIS G 3452 – For use in water, gas & air flow.

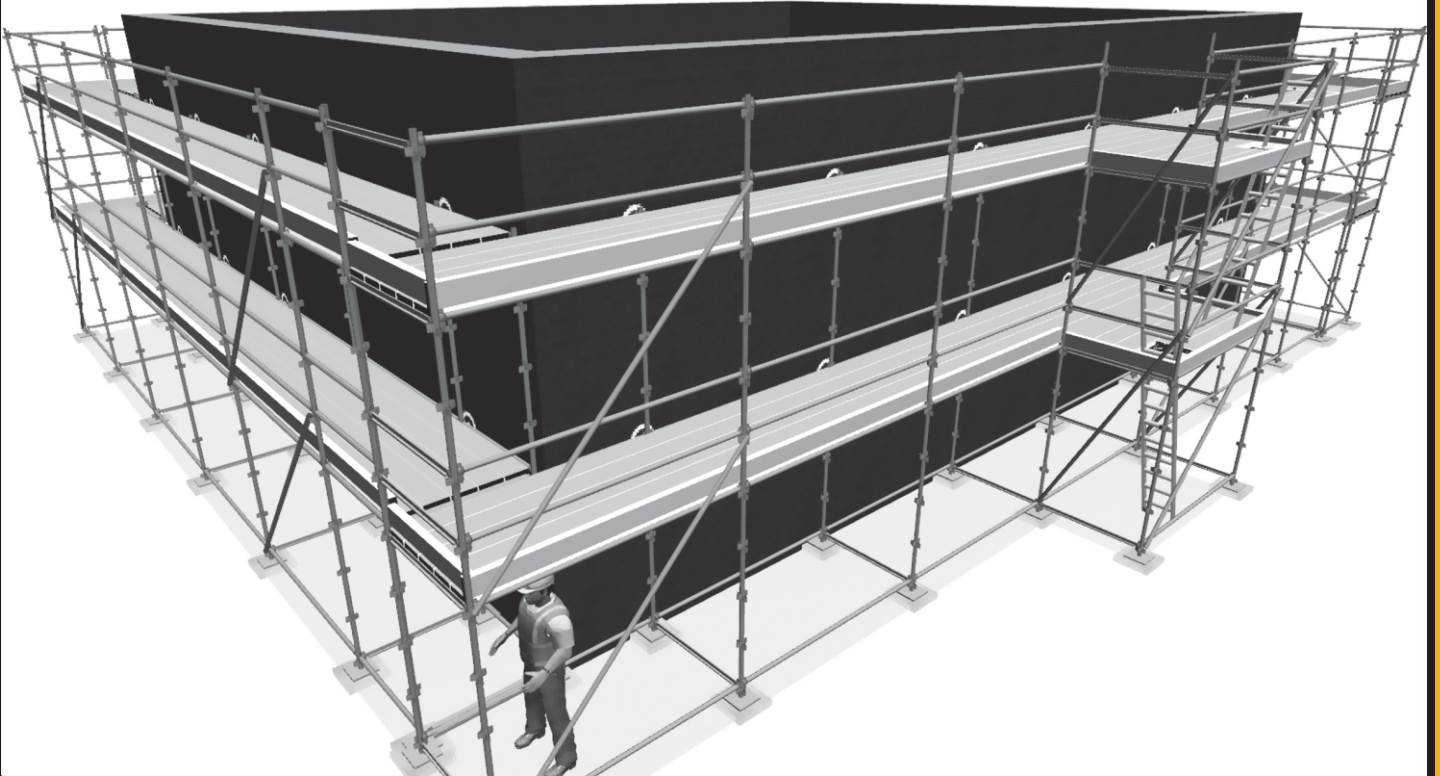
## Galvanized and Black Pipes for Water, Gas and Air Conforming to IS-1239 (Part-1) 2004/ BS-1387/ IS-1161 (Structural Tubes)

					Nominal Weight Galvanized & Black Tubes				Sockets		Tolerance  a) Thickness 1. Galvanized +/- 5% 2. Black +/- 8% * Better than ISI  b)Weight 1. Single Tube (Light Series) + 10% -8%  2. Single Tube (Med. & Heavy Tube) +/-10%  3. For quantities per load of 10 tonnes minimum (Light Series) + 7.5%-5%  4. For quantities per load of 10 tonnes minimum (Medium & Heavy) +/- 7.5%  c) Length 1. Normal 6 m +/- 0.02/ 0.03 Meter 2. Random length 4 to 7 Meters or as specified by the
			Wall Thickness		Plain End		Screwed & Socketed				
N.B	Series	Mean Outside Diameter (MM)	MM	SWG	Kg/m	Mtrs/ Tone	Kg/m	Mtrs/ Tone	OD in MM	Length MM	
15	Light	21.20	2.00	14	0.95	1056	0.95	1046	27.00	37.00	
	Medium	21.40	2.60	12	1.21	826	1.22	820			
	Heavy	21.40	3.20	10	1.44	694	1.45	690			
20	Light	26.65	2.00	13	1.38	725	1.39	719	32.50	39.00	
	Medium	26.90	2.60	12	1.56	641	1.57	637			
	Heavy	26.90	3.20	10	1.87	535	1.88	532			
25	Light	33.50	2.30	12	1.98	505	2.00	500	39.50	46.00	
	Medium	33.7	2.60	10	2.41	415	2.43	412			
	Heavy	533.75	3.20	8	2.93	341	2.95	339			
32	Light	42.20	2.60	12	2.54	394	2.57	389	49.00	51.00	
	Medium	42.25	3.20	10	3.10	323	3.13	319			
	Heavy	42.45	4.00	8	3.79	264	3.82	262			
40	Light	48.10	2.90	11	3.23	310	3.27	306	56.00	51.00	
	Medium	48.35	3.20	10	3.56	281	3.60	278			
	Heavy	48.35	4.00	8	4.37	229	4.41	227			
50	Light	59.90	2.90	11	4.08	245	4.15	241	68.00	60.00	
	Medium	60.25	3.60	9	5.03	199	5.10	196			
	Heavy	60.25	4.50	7	6.19	162	6.26	160			
65	Light	75.60	3.20	10	5.71	175	5.83	172	84.00	69.00	
	Medium	75.95	3.60	9	6.42	156	6.54	153			
	Heavy	75.95	4.50	7	7.93	126	8.05	124			
80	Light	88.30	3.20	10	6.72	149	6.89	145	98.00	75.00	
	Medium	88.75	4.00	8	8.36	120	8.53	117			
	Heavy	88.75	4.80	6	9.90	101	10.10	99			





*Building Infrastructure for last 40 years*





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