Pimpri Chinchwad Municipal Corporation
RATE ANALYSIS

Construction of Grade Separator at Dange Chowk Dt-28/5/18

of size 600 X 450mm

Item: - Providing & fixing composite Resin Manhole cover & frame of load bearing capacity (C-250) 25 MT (Inspection shall be as per guidelines of EN 124:2004) Required replacement warranty for 24 months, including Loading, Unloading, Transportation, all other Taxes excluding GST, etc. complete. As directed by Engineer-in-Charge

Marking Required on Cover:

- Manufacturing Guidelines EN-124
- Load Bearing Capacity C-250
- Name or id Mark of Manufacturer
- Year of Manufacturing.

For following size: 600mm x 450mm with Frame

Lowest Rate from Comparative statement is Rs5,000/- per No.
Hence Rate is proposed as Rs5,000/- per No.

Junior Engineer
BRTS PCMC

Deputy Engineer
BRTS PCMC

Executive Engineer
BRTS PCMC

Rate is approved as Rs. 5,000/- per No (Rs Five Thousand only) per No.

Jt. City Engineer
PCMC Pimpri– 18

Pimpri Chinchwad Municipal Corporation
RATE ANALYSIS

Dt-28/5/18

Construction of Grade Separator at Dange Chowk

size 900 X 450 mm

Item: - Providing & fixing composite Resin Manhole cover & frame of load bearing capacity (C-250) 25 MT (Inspection shall be as per guidelines of EN 124:2004) Required replacement warranty for 24 months, including Loading, Unloading, Transportation, all other Taxes excluding GST, etc. complete. As directed by Engineer-in-Charge

Marking Required on Cover:

- Manufacturing Guidelines EN-124
- Load Bearing Capacity C-250
- Name or id Mark of Manufacturer
- Year of Manufacturing.

For following size: 900mm x 450mm with Frame

Lowest Rate from Comparative statement is Rs 7,000/- per No.
Hence Rate is proposed as Rs 7,000/- per No.

Junior Engineer
BRTS PCMC

Deputy Engineer
BRTS PCMC

Executive Engineer
BRTS PCMC

Rate is approved as Rs. 7,000/- per No (Rs Seven Thousand only) per No.

DE

Jt. City Engineer
PCMC Pimpri – 18

Pimpri Chinchwad Municipal Corporation
RATE ANALYSIS

Construction of Grade Separator at Dange Chowk Dt-28/5/18

size 600x600 mm

Item: - Providing & fixing composite Resin Manhole cover & frame of load bearing capacity (C-250) 25 MT (Inspection shall be as per guidelines of EN 124:2004) Required replacement warranty for 24 months, including Loading, Unloading, Transportation, all other Taxes excluding GST, etc. complete. As directed by Engineer-in-Charge

Marking Required on Cover:

- Manufacturing Guidelines EN-124
- Load Bearing Capacity C-250
- Name or id Mark of Manufacturer
- Year of Manufacturing.

For following size: 600mm x 600mm with Frame

Lowest Rate from Comparative statement is Rs 7,400/- per No.
Hence Rate is proposed as Rs 7,400/- per No.

Junior Engineer
BRTS PCMC

Deputy Engineer
BRTS PCMC

Executive Engineer
BRTS PCMC

Rate is approved as Rs. 7,400/- per No (Rs Seven Thousand Four Hundred only) per No.

Jt. City Engineer
PCMC Pimpri – 18

Pimpri Chinchwad Municipal Corporation
RATE ANALYSIS

Dt-28/5/18

Construction of Grade Separator at Dange Chowk

size 900X600mm

Item: - Supplying & fixing composite Resin Manhole cover & frame of load bearing capacity (C-250) 25 MT (Inspection shall be as per guidelines of EN 124:2004) Required replacement warranty for 24 months, including Loading, Unloading, Transportation, all other Taxes excluding GST, etc. complete. As directed by Engineer-in-Charge

Marking Required on Cover:

- Manufacturing Guidelines EN-124
- Load Bearing Capacity C-250
- Name or id Mark of Manufacturer
- Year of Manufacturing.

For following size: 900mm x 600mm with Frame

Lowest Rate from Comparative statement is Rs 9,000/- per No.
Hence Rate is proposed as Rs 9,000/- per No.

Junior Engineer
BRTS PCMC

Deputy Engineer
BRTS PCMC

Executive Engineer
BRTS PCMC

Rate is approved as Rs.9,000/- per No (Rs Nine Thousand only) per No.

Jt. City Engineer
PCMC Pimpri – 18

Pimpri Chinchwad Municipal Corporation
RATE ANALYSIS

D+-28/5/18

Construction of Grade Separator at Dange Chowk

Item: - Supplying & fixing composite Resin Manhole cover & frame of size 900x900 mm load bearing capacity (C-250) 25 MT (Inspection shall be as per guidelines of EN 124:2004) Required replacement warranty for 24 months, including Loading, Unloading, Transportation, all other Taxes excluding GST, etc. complete. As directed by Engineer-in-Charge

Marking Required on Cover:

- Manufacturing Guidelines EN-124
- Load Bearing Capacity C-250
- Name or id Mark of Manufacturer
- Year of Manufacturing.

For following size: 900mm x 900mm with Frame

Lowest Rate from Comparative statement is Rs 12,000/- per No.
Hence Rate is proposed as Rs 12,000/- per No.

Junior Engineer
BRTS PCMC

Deputy Engineer
BRTS PCMC

Executive Engineer
BRTS PCMC

Rate is approved as Rs. 12,000/- per No (Rs Twelve Thousand only) per No.

DE

Jt. City Engineer
PCMC Pimpri – 18

Pimpri Chinchwad Municipal Corporation
RATE ANALYSIS

Construction of Grade Separator at Dange Chowk

Item: - Providing & fixing composite Resin Manhole Strom water drain gully gratings cover & frame of size 600x600 mm load bearing capacity (C-250) 25 MT (Inspection shall be as per guidelines of EN 124:2004), With replacement warranty of 24 months, including Loading, Unloading, Transportation, all other Taxes excluding GST, etc. Complete as directed by Engineer-in-Charge.

Marking Required on Cover:

- Manufacturing Guidelines EN-124
- Load Bearing Capacity C-250
- Name or id Mark of Manufacturer
- Year of Manufacturing.

For following size: 600mm x 600mm with Frame

Lowest Rate from Comparative statement is Rs8,400/- per No.
Hence Rate is proposed as Rs8,400/- per No.

Junior Engineer
BRTS PCMC

Deputy Engineer
BRTS PCMC

Executive Engineer
BRTS PCMC

Rate is approved as Rs. 8,400/- per No (Rs Eight Thousand Four Hundred only) per No.

DE

Jt. City Engineer
PCMC Pimpri – 18

Pimpri Chinchwad Municipal Corporation
RATE ANALYSIS

Construction of Grade Separator at Dange Chowk

Item: - Providing & fixing composite Resin Manhole Strom water drain gully gratings cover & frame of size 900x600mm load bearing capacity (C-250) 25 MT (Inspection shall be as per guidelines of EN 124:2004), With replacement warranty of 24 months, including Loading, Unloading, Transportation, all other Taxes excluding GST, etc. Complete as directed by Engineer-in-Charge.

Marking Required on Cover:

- Manufacturing Guidelines EN-124
- Load Bearing Capacity C-250
- Name or ID Mark of Manufacturer
- Year of Manufacturing.

For following size: 900mm x 600mm with Frame

Lowest Rate from Comparative statement is Rs10,000/- per No.
Hence Rate is proposed as Rs10,000/- per No.

Junior Engineer
BRTS PCMC

Deputy Engineer
BRTS PCMC

Executive Engineer
BRTS PCMC

Rate is approved as Rs. 10,000/- per No (Rs Ten Thousand only) per No.

Jt. City Engineer
PCMC Pimpri – 18

Pimpri Chinchwad Municipal Corporation
RATE ANALYSIS

Construction of Grade Separator at Dange Chowk

Item: - Providing & fixing composite Resin Manhole Strom water drain gully gratings cover & frame of size 900 x 900 mm load bearing capacity (C-250) 25 MT (Inspection shall be as per guidelines of EN 124:2004), With replacement warranty of 24 months, including Loading, Unloading, Transportation, all other Taxes excluding GST, etc. Complete as directed by Engineer-in-Charge.

Marking Required on Cover:

- Manufacturing Guidelines EN-124
- Load Bearing Capacity C-250
- Name or id Mark of Manufacturer
- Year of Manufacturing.

For following size: 900mm x 900mm with Frame

Lowest Rate from Comparative statement is Rs13,500/- per No.
Hence Rate is proposed as Rs13,500/- per No.

Junior Engineer
BRTS PCMC

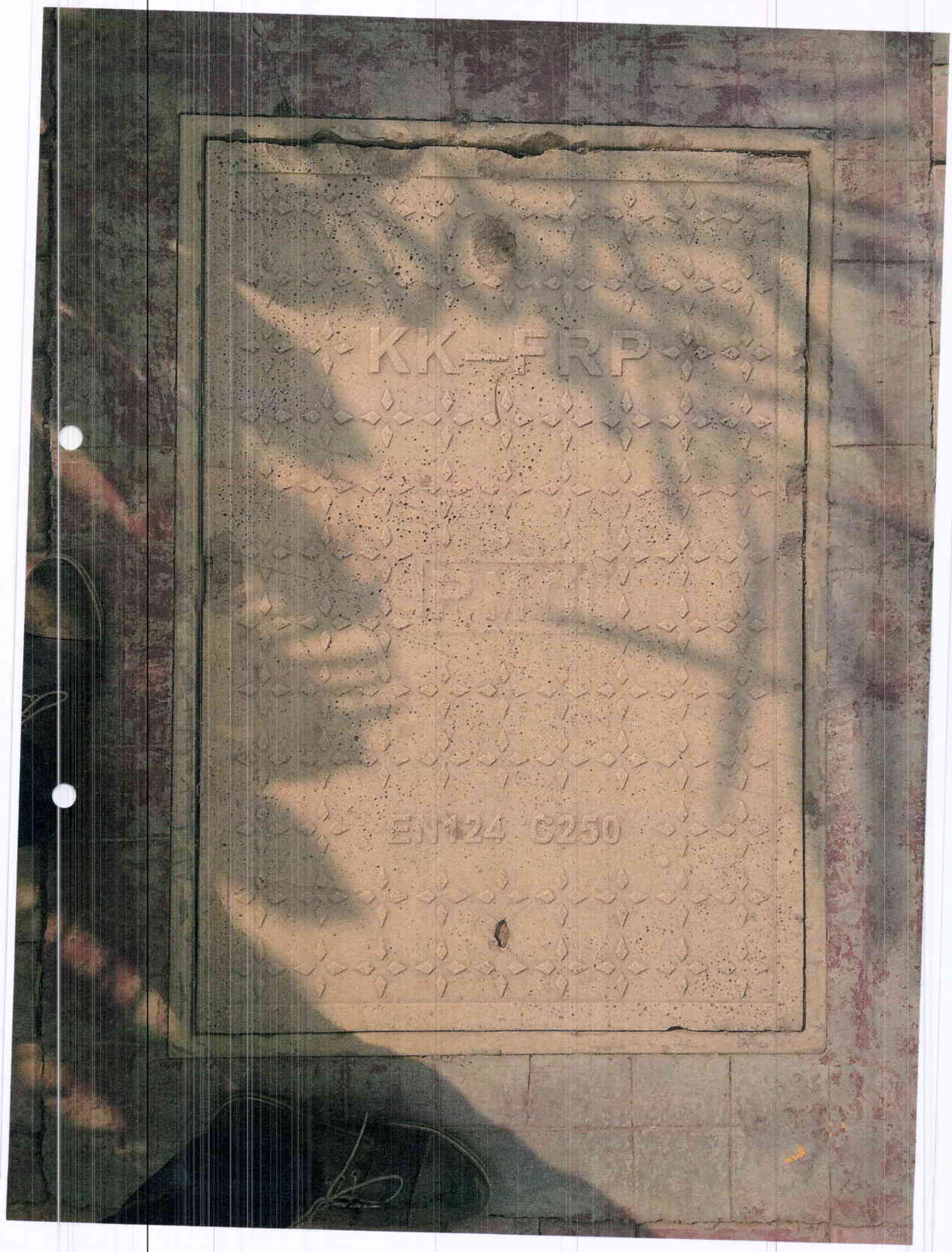
Deputy Engineer
BRTS PCMC

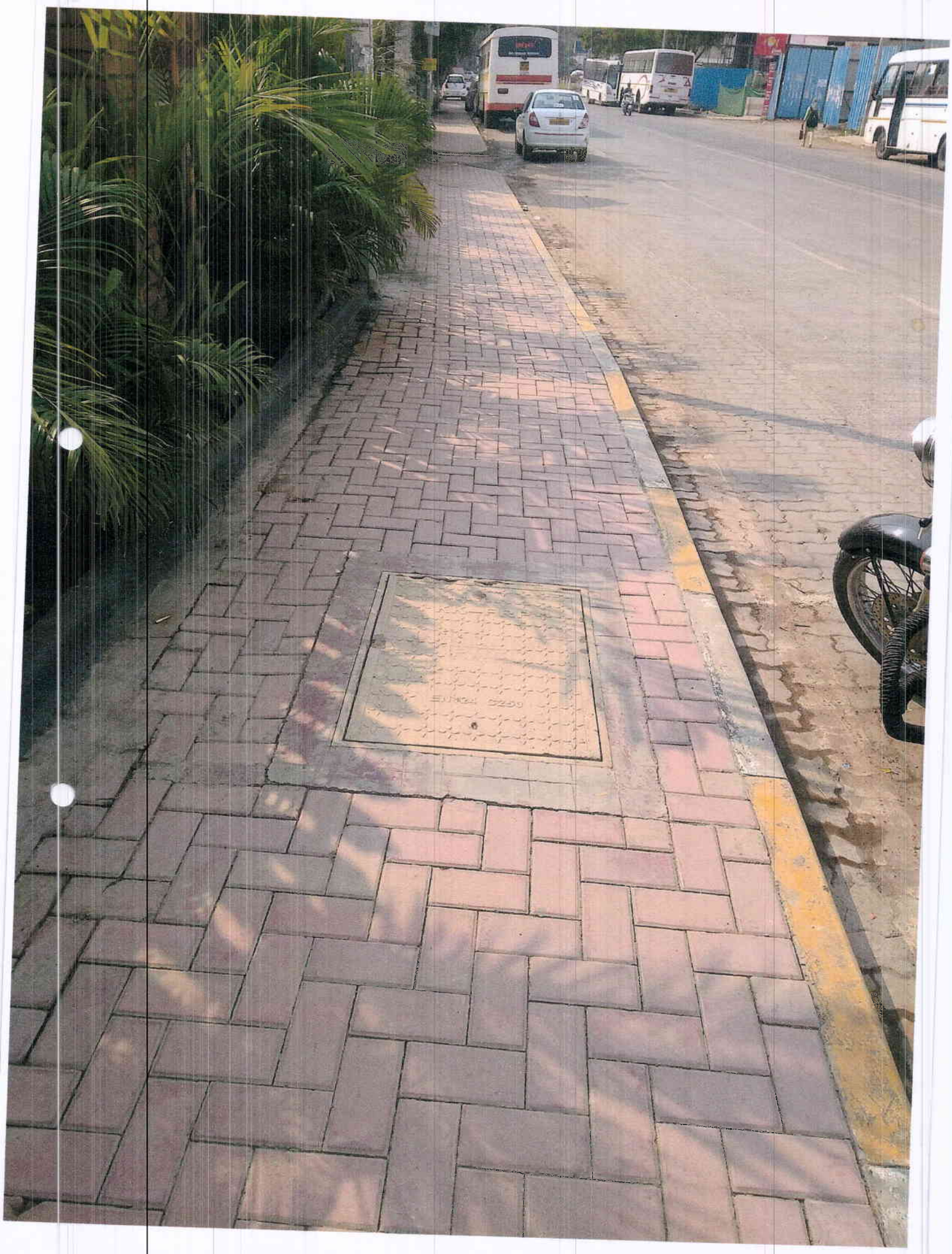
Executive Engineer
BRTS PCMC

Rate is approved as Rs. 13,500/- per No (Rs Thirteen Thousand Five Hundred only) per No.

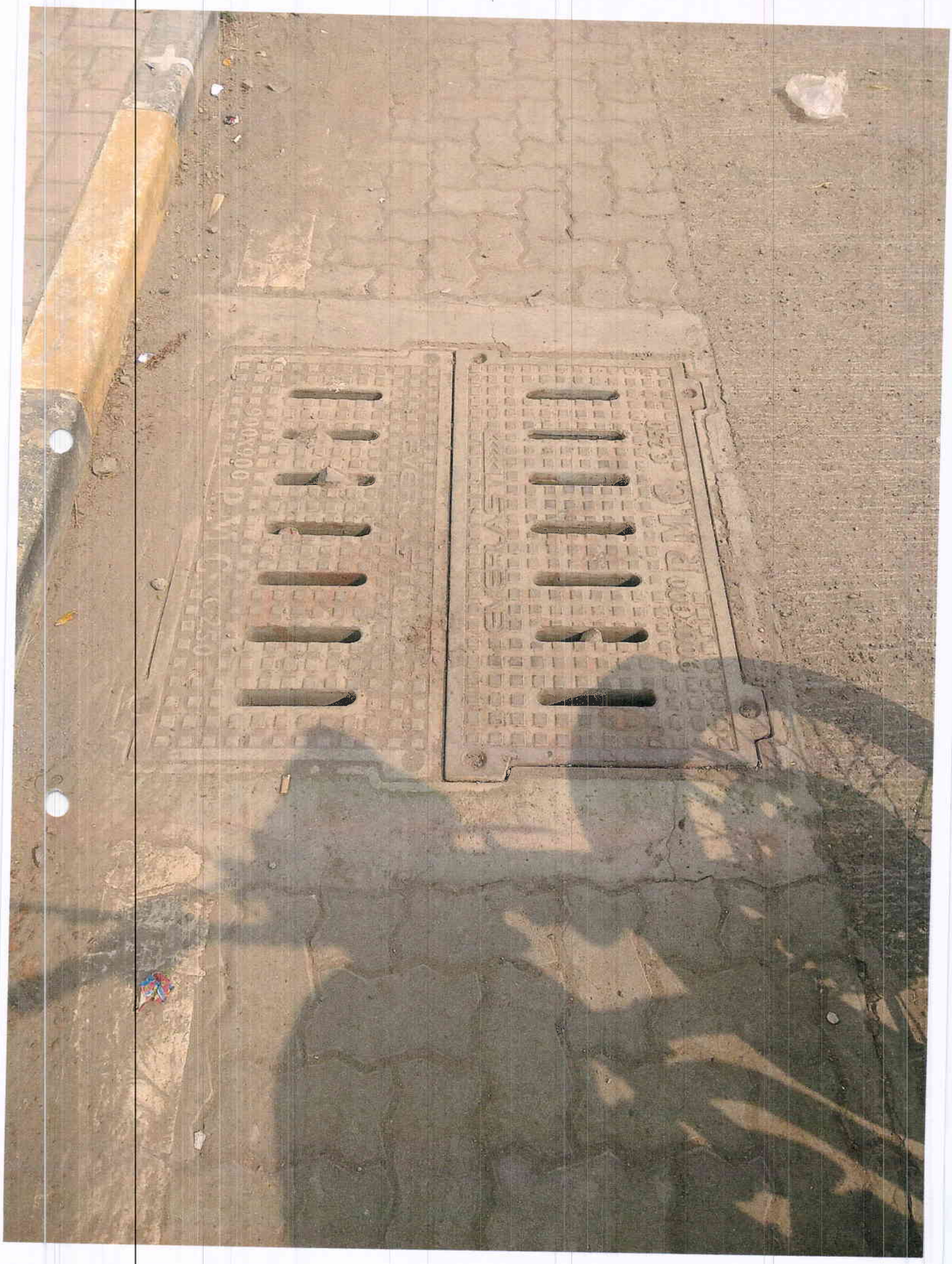
Jt. City Engineer
PCMC Pimpri – 18

THERMODRAIN
www.frpmanholecover.com
600X600
C250
ZARA


KK-FRP
EN124 C250



STORM DRAIN
DO NOT DUMP


EAST JORDAN IRON WORKS
EAST JORDAN IRON WORKS

PG
PG
PG

KK - FRP

Durability - Strength - Quality

Cir. Manhole Cover & Frame | *Rect. Manhole Cover & Frame* | *Grating Cover & Frame*

Profile

We are leading manufacturers of composite Manhole Covers & Frames and Storm Water Grating Covers and Frames in India. KK – FRP Manhole Covers & Frames are manufactured for light, medium, heavy and extra heavy duty load applications (1.5 Ton upto 40 Ton). Our infrastructure and facilities spread across 20000 sq.ft. consist of high end testing and instrumentation capabilities for production of composite manhole covers and gratings.

Vision

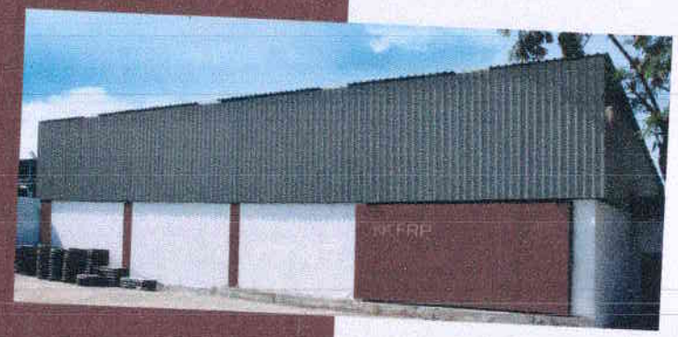
To achieve market leadership in manufacturing high quality composite manhole covers & frames and storm water gratings.

Mission

To maintain constant focus on innovation and quality consciousness.

Values

- Customer service and satisfaction
- Quality products
- Integrity in dealings



The Applications for KK - FRP Manhole Covers & Frames:

- Underground Sewerage and Storm Water Drainage Projects developed by Housing sector, Govt. and semi Govt. Depts., Municipal Corporations
- Underground Electrical Installations
- Trench Covers in various applications
- Housing Industry, Malls, Multiplexes
- City Roads and Foot Path Works
- Telecommunications
- Highways and Ports
- Railways
- Defense
- Airports
- Water, Gas and Petroleum installations
- Beautification of Landscapes
- Traffic lights, Street lights, etc.

Product Range

Our range of products mainly comprises of:

- KK – FRP Manhole Covers & Frames
- KK – FRP Storm Water Grating Covers & Frames
- KK – FRP Tank Covers and Frames

KK - FRP Manhole Covers & Frames

Our high quality KK – FRP Manhole Covers & Frames are available in all standard sizes with load bearing capacities from 1.5 Ton to 40 Ton. They are available in circular, square and rectangular shapes with single and double sealed arrangements.

KK - FRP Grating Covers & Frames

Our FRP Grating Covers & Frames are available in standard sizes and shapes to suit the standards of appropriate drainage requirements.

Advantages

Quality

Waterproof, weatherproof, non corrosive, burglarproof
High strength : weight ratio
Light weight – ease of handling
Temperature resistance from – 40 degrees to 80 degrees

Durability

Life span of 30 + years

Sizes & Configuration

Standard designs conforming to IS:1726 – 1991 are 2.5, 10, 20 & 35 Ton & BSEN – 124 are 1.5, 12.5, 25 & 40 Ton

Customization

Options of decorative surface designs and color variations available

Manhole Covers & Frames

Grades as per IS:1726 standards

Test load

Light Duty (LD 2.5) – 2.5 Ton

Medium Duty (MD 10) – 10 Ton

High Duty (HD 20) – 20 Ton

Extra Heavy Duty (EHD 35) – 35 Ton

Grades as per BSEN- 124 standards

Test load

Light Duty (A15) – 1.5 Ton

Medium Duty (B125) – 12.5 Ton

High Duty (C250) – 25 Ton

Extra Heavy Duty (D400) – 40 Ton

Light Duty Manhole Covers & Frames (LD 2.5 / A15)

Areas where our Light Duty Manhole Covers & Frames are used include pedestrians, pedal cyclists, footways, car parking, residential complexes, institutions and where light vehicular traffic is common.

Medium Duty Manhole Covers & Frames (MD 10 / B125)

Areas where our Medium Duty Manhole Covers & Frames are used include roads, service lanes and where medium vehicular traffic is common.

Heavy Duty Manhole Covers & Frames (HD 20 / C250)

Areas where our Heavy Duty Manhole Covers & Frames are used include city roads, commercial areas, bus terminals and where heavy vehicular traffic is common.

Extra Heavy Duty Manhole Covers & Frames: (EHD 35 / D400)

Areas where our Extra Heavy Duty Manhole Covers & Frames are used include commercial areas, industrial areas, warehouses and where heavy vehicular traffic is common with heavy trucks and trailers.

Sr. No.	Size	Grade Designation as per IS:1726/ BSEN - 124	Test Load as per IS:1726/ BSEN - 124
1	Dia 540 mm	LD – 2.5 / A15	2.5/ 1.5 Ton
		MD – 10 / B125	10/12.5 Ton
		HD – 20 / C250	20/ 25 Ton
		EHD – 35 / D400	35/ 40 Ton
2	Dia 560 mm	LD – 2.5 / A15	2.5/ 1.5 Ton
		MD – 10 / B125	10/12.5 Ton
		HD – 20 / C250	20/ 25 Ton
		EHD – 35 / D400	35/ 40 Ton
3	450x450 mm	LD – 2.5 / A15	2.5/ 1.5 Ton
		MD – 10 / B125	10/12.5 Ton
		HD – 20 / C250	20/ 25 Ton
		EHD – 35 / D400	35/ 40 Ton
4	450x600mm	LD – 2.5 / A15	2.5/ 1.5 Ton
		MD – 10 / B125	10/12.5 Ton
		HD – 20 / C250	20/ 25 Ton
		EHD – 35 / D400	35/ 40 Ton
5	450x900 mm	LD – 2.5 / A15	2.5/ 1.5 Ton
		MD – 10 / B125	10/12.5 Ton
		HD – 20 / C250	20/ 25 Ton
		EHD – 35 / D400	35/ 40 Ton
6	600x600 mm	LD – 2.5 / A15	2.5/ 1.5 Ton
		MD – 10 / B125	10/12.5 Ton
		HD – 20 / C250	20/ 25 Ton
		EHD – 35 / D400	35/ 40 Ton
7	600x900 mm	LD – 2.5 / A15	2.5/ 1.5 Ton
		MD – 10 / B125	10/12.5 Ton
		HD – 20 / C250	20/ 25 Ton
		EHD – 35 / D400	35/ 40 Ton
8	900x900 mm	LD – 2.5 / A15	2.5/ 1.5 Ton
		MD – 10 / B125	10/12.5 Ton
		HD – 20 / C250	20/ 25 Ton
		EHD – 35 / D400	35/ 40 Ton

Storm Water Grating Covers & Frames

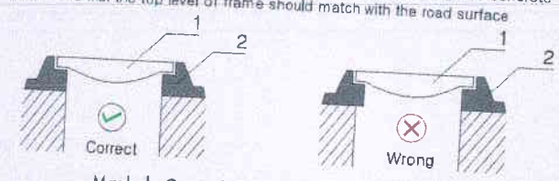
KK – FRP Storm Water Grating Covers & Frames are suitable for footways, residential areas, swimming pool and car parking and areas with heavy duty traffic. Our Grating Covers & Frames are wear–resistant and climate–resistant and can be used long–term under different environmental conditions.

Sr. No.	Size	Grade Designation as per IS:1726/ BSEN - 124	Test Load as per IS:1726/ BSEN - 124
1	450x450 mm	LD – 2.5 / A15	2.5/ 1.5 Ton
		MD – 10 / B125	10/12.5 Ton
		HD – 20 / C250	20/ 25 Ton
2	600x450 mm	LD – 2.5 / A15	2.5/ 1.5 Ton
		MD – 10 / B125	10/12.5 Ton
		HD – 20 / C250	20/ 25 Ton
3	900x450 mm	LD – 2.5 / A15	2.5/ 1.5 Ton
		MD – 10 / B125	10/12.5 Ton
		HD – 20 / C250	20/ 25 Ton
4	900x600 mm	LD – 2.5 / A15	2.5/ 1.5 Ton
		MD – 10 / B125	10/12.5 Ton
		HD – 20 / C250	20/ 25 Ton

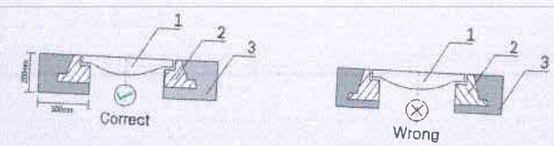
Fittings

Installation Process:

- Prepare concrete bed considering height of frame
- The clear opening of the frame should be equal to the clear opening of the chamber
- Frame should be embedded in 300x200mm of minimum M–20 grade concrete
- Make sure that the top level of frame should match with the road surface



Manhole Cover & Frame/Grating Cover & Frame

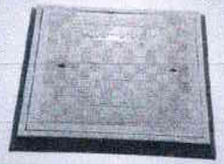


Manhole Cover & Frame/Grating Cover & Frame

Product Gallary

Light Duty Manhole Covers & Frames

600x450mm

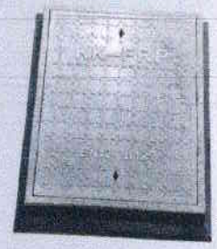


600x600mm

900x450mm

900x600mm

Medium Duty Manhole Covers & Frames



600x450mm

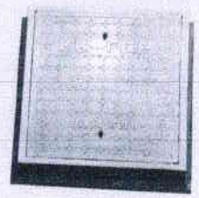
600x600mm

900x450mm

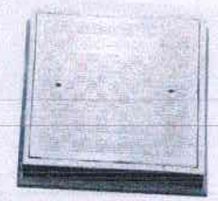
Heavy Duty Manhole Covers & Frames

540mm

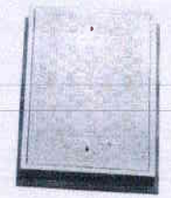
560mm



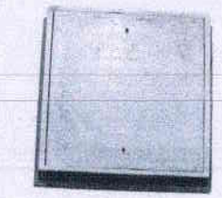
600x450mm



600x600mm



900x450mm



900x600mm

Our Other Products - Pre Cast Concrete Manhole / Grating Covers & Frames

Our Products are Approved & Being Used by:

- **Government Sector**
- Municipal Corporations of Mumbai, Pune, Navi Mumbai, Pimpri, Nasik, Solapur, Kolhapur, Surat, Vadodara, Aurangabad, Amravati etc.
- Maharashtra Housing and Development Authority (MHADA)
- City Industrial and Development Corporation (CIDCO)
- Maharashtra Jeevan Pradhikaran (MJP)
- Mumbai Metropolitan Regional Development Authority (MMRDA)
- Military Engineering Services (MES)
- Public Works Deptt. (PWD)
- Central Public Works Deptt. (CPWD)

- **Private Sector**
- Major Builders & Contractors of Mumbai mainly Eagle Constn. Co., Shubhash Projects, Navi Mumbai SEZ (RIL), Puranik Builders, Hiranandani Builders, Raheja Builders, Dhariwal Realty, Kalpataru, Rustomjee, Lodha Builders, India Bulls, etc.
- Major Builders of Pune and surrounding mainly Lavasa City Corporation, Amby Valley, Panaraipee Schemes, DSK Builders, Magarpatta Builders, Vascon Engineers, Amanora Townships, Rohan Builders, Brahma Builders, etc.
- Major Contractors of India mainly ECC L&T, B G Shirke Construction, Shapoorji Pallonji, HCC, etc.

KK - FRP

Durability · Strength · Quality

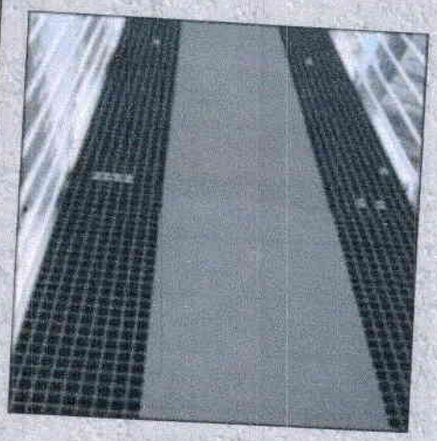
K.K. Manhole & Gratings Co.

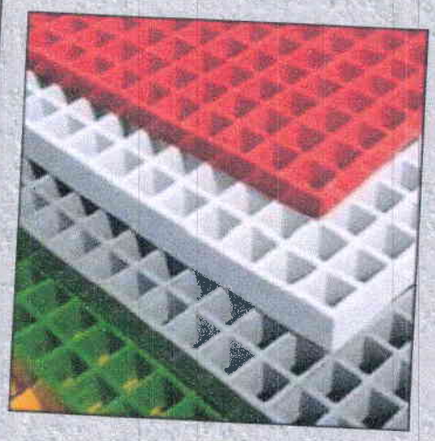
Shop No. 8, Shelley Apartments, Gangapur Road, Ambadwadi, Nashik-422013, India
Tel. : +91 253 2340556
Fax : +91 253 2340634
Email : kkmgnsk@gmail.com / mgnsk@gmail.com
Web : www.kkfrp.com

Authorised Representative

Rawji™

FRP/GRP MANHOLE COVERS

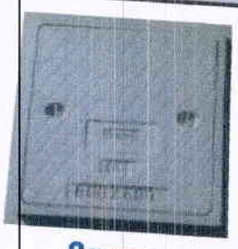




Rawji™

FRP/GRP MANHOLE COVERS

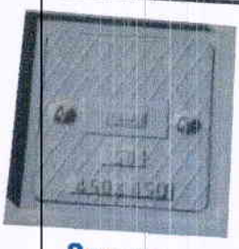
MCGM Approved



Square
600 mm X 600 mm

Square Grating
600 mm X 600 mm

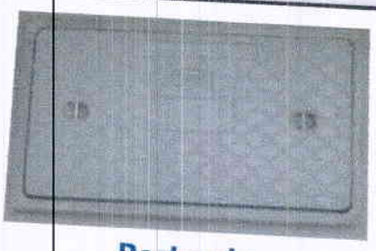
Square Grating
450 mm X 450 mm



Square
450 mm X 450 mm

Square
300 mm X 300 mm

Water Tank Cover
600 mm Dia



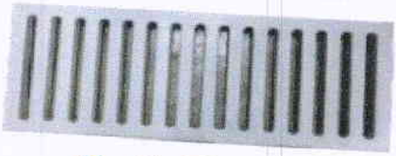
Rectangle
900 mm X 450 mm

Circular
530 mm Dia

Circular
600 mm Dia

Pultruded Gratings

Moulded Square Gratings



Moulded Gratings

FRP/GRP MANHOLE COVERS

Rawji™

STANDARD SPECIFICATIONS:

FRP Manhole Covers are made using thermoset material for long term durability. The material comprises of cross-linked polyesters combined with Fibreglass reinforced materials to sustain against wear-n-tear for heavy load vehicular traffic. It is 40% lighter than traditional Precast Concrete and Cast Iron covers. Provides upto 5 times more compressive strength. This resilient material withstands constant exposure to weather or sun without sacrificing security or aesthetics.

ADVANTAGES

No resale value hence free from theft.

Easy to handle and no risk of injury due to light weight.

Does not rust due to chemical / sewage / rain water.

High service life as it does not corrode and has high impact resistance.

High on aestetics. The covers are self pigmented and do not require periodical painting for maintenance.

The pigments are built in the material and UV stabilized. Hence there is no peeling / fading of the colours due to sunlight.

Resistance to extreme temperatures.

RECOMMENDED LOAD CAPACITY AS PER IS:1726-1991 & EN-124

LIGHT DUTY-Test load-2.5 Ton

Suitable for use within residential complexes, for areas accessible to pedestrians and bicycles and occasional Light Motor Vehicle traffic. These manhole covers can also be used for 'Inspection Chambers'.

MEDIUM DUTY-Test load-10 Ton

Suitable for use under medium-duty vehicular traffic, passenger cars and vehicles of comparable weight including car parking areas.

HEAVY DUTY-Test load-20 Ton

Suitable for use in carriageways with fast moving traffic, including trucks, city trunk roads, bus terminals with heavy duty vehicular traffic.

Rawji™

FRP/GRP MANHOLE COVERS :

STANDARD SIZES AVAILABLE :

Product Type	Size (Clear Opening)	
	in mm	in inches
Circular Manhole cover with Frame	530 Dia	21" Dia
	600 Dia	24" Dia
Rectangular Manhole cover with Frame	450 X 600	18" X 24"
	450 X 900	18" X 36"
	600 X 900	24" X 36"
	900 X 900	36" X 36"
Square Manhole cover with Frame	300 X 300	12" X 12"
	450 X 450	18" X 18"
	600 X 600	24" X 24"
	900 X 900	36" X 36"
Gully Gratings with Frame	450 X 450	18" X 18"
	450 X 600	18" X 24"
	600 X 500	24" X 20"
	600 X 600	24" X 24"
Water Tank Cover	600 Dia	24" Dia

★ Custom Sizes Available on Request ★

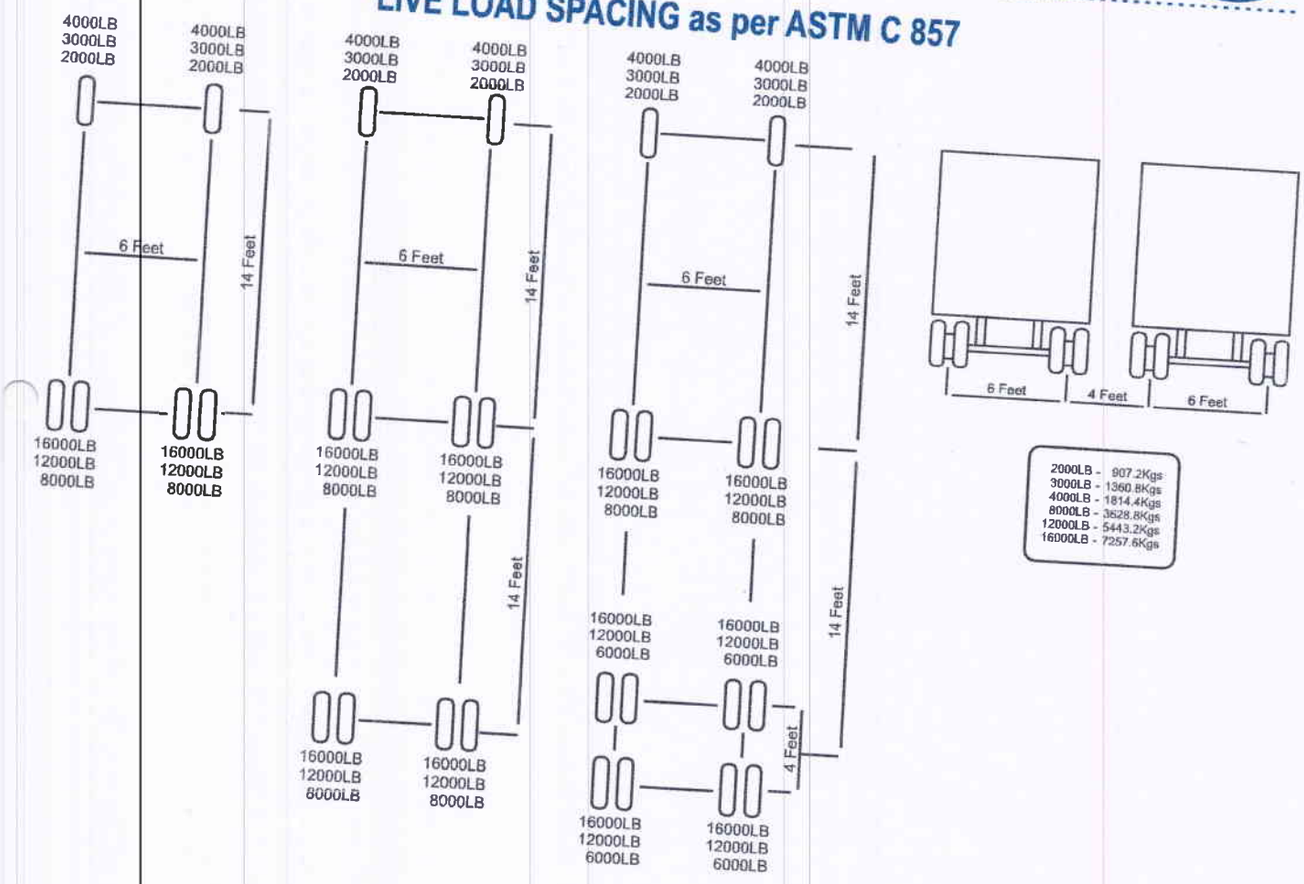
FRP Manhole Covers Comparison Table

PARAMETER	RCC	CI	Rawji™ FRP Covers
Life Span	Low	Moderate	High
Strength/Weight Ratio	Very Low	Moderate	Very High
Cost	Low	Moderate	Comparable to CI
Scrap Value	Low	High	Nil (Zero Scrap Value)
Colour Range	Concrete Grey	Black	Range Available
Logo Embossing	Available	Not Available	Available
Custom Design / Size	Not Available	Not Available	Available
Handling	Difficult	Difficult	Easy
Thermal Expansion	Negligible	High	Nil
Corrosion Resistance	Low	Medium	High
Abrasion Resistance	None	None	Yes

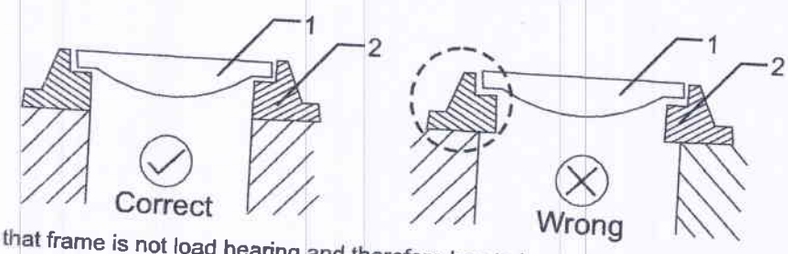
FRP/GRP MANHOLE COVERS

Rawji™

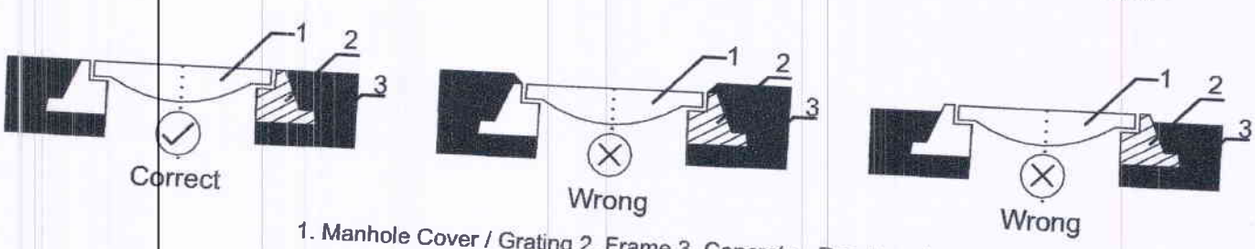
LIVE LOAD SPACING as per ASTM C 857



Installation Procedure



Please note that frame is not load bearing and therefore has to be completely supported from all sides



1. Manhole Cover / Grating 2. Frame 3. Concrete - Road level

Rawji™

FRP/GRP MANHOLE COVERS

Approvals

Municipal Corporation of Greater Mumbai (MCGM)

Kalyan -Dombivali Municipal Corporation (KDMC)

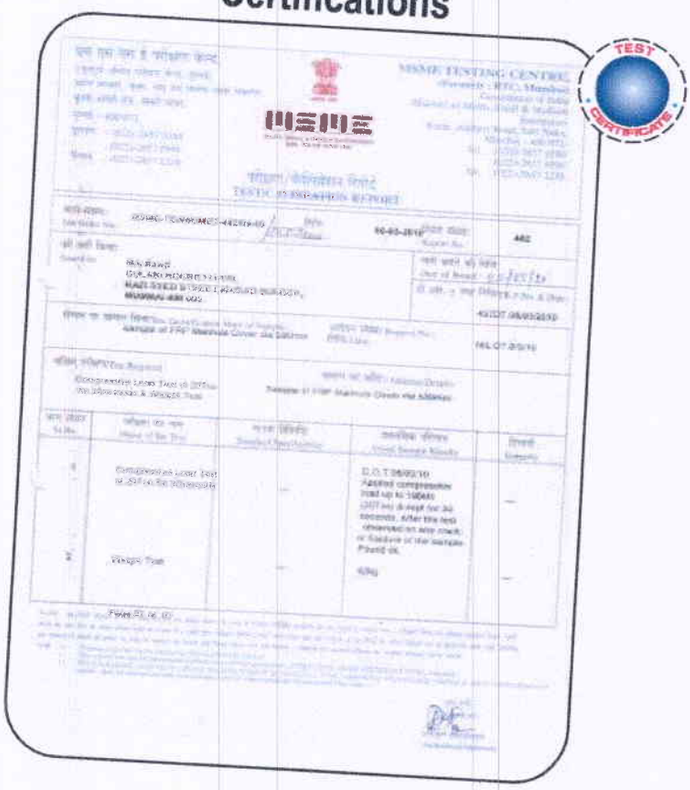
Corporation of Chennai

Chennai Municipal Corporation

Public Works Department

PWD
Goverment of Meghalaya

BARC

Bhabha Atomic Research Centre (BARC)

Certifications