

RAREAN
Fluid-Tech



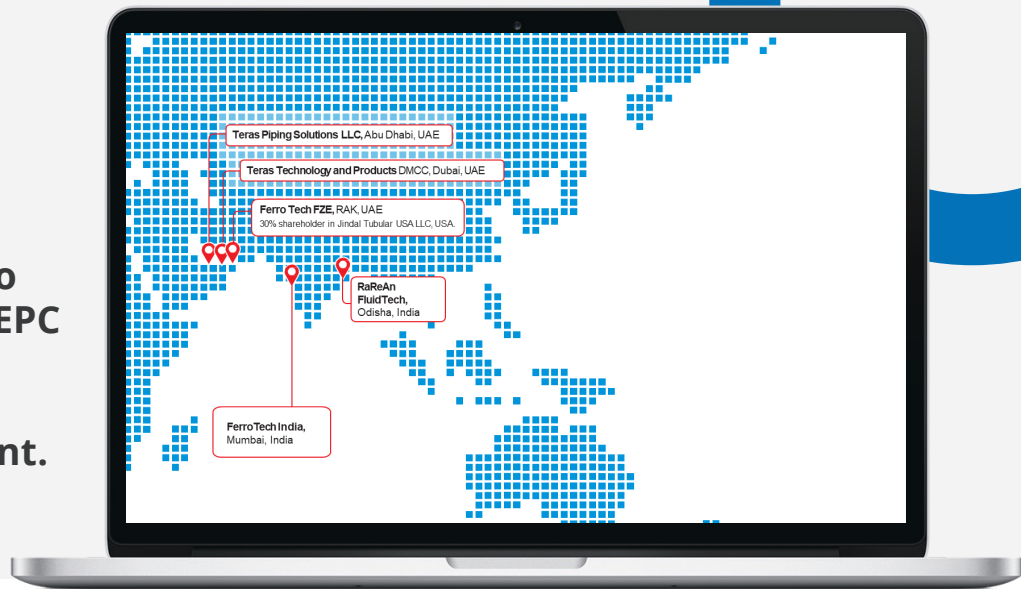
CATALOGUE FOR

RAREAN FLUID-TECH





RAREAN Group has diversified portfolio of Manufacturing, EPC business, Trading, Consultancy and Strategic Investment.



- » **FerroTech India Pvt Ltd** – is based out of Mumbai and is engaged in supplying ferroalloys to the Indian steel industry.
- » **Ferrotech- FZE, UAE** – 30% strategic shareholder in Jindal Tubular USA LLC, USA (JTUL). JTUL is a Large Diameter Steel Pipe Manufacturer based out of Mississippi, USA. It is preferred API steel pipe supplier to all major Oil and Gas Companies in North America like Kinder Morgan, Enterprise Products, Enbridge, Phillips 66 etc.
- » **Teras Piping Solutions LLC, UAE**– Registered with Abu Dhabi National Oil Company (ADNOC). It specializes in supplies of piping products like welded and seamless pipes, fittings, flanges, etc.
- » **Teras Technology and Products DMCC, UAE** - Supplies API Steel Plates & Coils to various Pipe Mills in Middle East. It has executed order over 200,000 MT API Steel. It has service Agreements with reputed pipe mills.



Rarean Fluid-Tech Pvt Ltd is a Polyethylene (PE) pipe manufacturer set up with an ideology of providing Best Quality Pipe with the philosophy of manufacturing pipes using 100 percent Pipe Making Grade Raw Material. It also ensures sustainability by using the process rejects of its own plant that is allowed as per relevant codes. The plant is housed in 8.5 acres in Jaymangala Industrial Area at Khordha, about 40 KM from Bhubaneswar, Eastern Coastal State Capital of Odisha, India.

It has a state-of-the-art plant currently with 5 production lines to produce about 15,000 MTPA of PE pipe. The plant can produce pipe from 20 to 500mm dia complying with all National and International standards. A dedicated and highly skilled professional team looks after production and post-production activities in the plant. A fully furnished laboratory is an integral part of the plant to safeguard quality parameters of products and services as per standard.



The illustrious founder of the company is a world renowned Pipe Industry Professional Braja Mishra. His professional career took him to a large part of the globe in the Oil & Gas & Water Pipeline Industry during his stints in leadership position in various corporates like Welspun Corp, Jindal Tubular USA LLC , Thriveni Oil Field , Maharashtra Seamless etc .

The company has a highly professional team and is well led by Aniruddha Mishra, a young entrepreneur who all believe in a Strong Ethical Corporate Work Culture. The company dreams to be the largest producer of PE pipe in India in a very short time.

Mission



We will continually strive to be the Trend Setter of Best Quality and the Largest Producer of Polyethylene Pipe in the India.



We will aggressively pursue and invest in technology and research to make a foot print in the plastic pipe industry to offer the highest quality product in the agriculture , irrigation , oil & gas , sewerage & plumbing segment of the National and international markets.



We wish to make "INVA " the most trusted brand in domestic and international market.



INVA BRAND VALUE

In Sanskrit, it means pervading or spreading throughout. Rarean Fluid - Tech working its way in to spreading its presence globally similar to INVA. INVA guarantees superior performance with the objective of providing high cost-benefit to ensure that customer's long-term goals are addressed.

No wonder that INVA product is already gaining recognition and is quickly spreading its wings to a broader market.



State of the art of manufacturing



Wide Product Range



Highest Dimensional Accuracy



Conscientious Product Quality

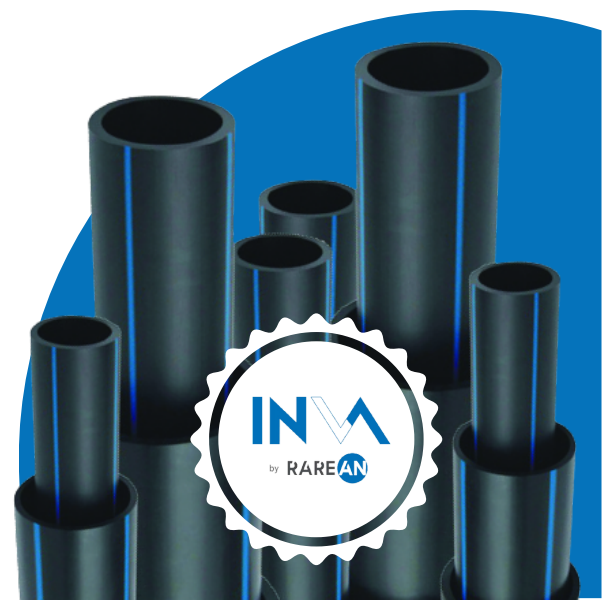


About INVA Pipe

Size	◇ 20mm – 250mm ◇ Upto 500mm under commissioning
Nominal Length	◇ 20-90 mm Coils upto 300m ◇ 110-250mm Pipes upto 8m ◇ Alternate length can be provided as per requirements
Specifications	◇ IS: 4984/ 2016 ◇ ISO: 4427 ◇ ISO: 4437 ◇ EN: 12201 ◇ IS: 14333 –Sewerage* ◇ IS: 14885 –Gas* ◇ WRAS* * Under Approval
Grades	PE 63, PE 80, PE 100.
Pressure	PN 2.5 - PN 20
Classes Color	Black, Blue, Orange, Yellow
Temperature Range	-45 to 55 deg C

Quality Policy & its Implementation

- RAREAN is committed to manufacture & supply products as per customer's requirement in time through continual improvement in quality management system and professional workforce.
- Our manufacturing unit has its own in-house Lab equipped with latest equipment and manned by highly qualified & technical staff.
- The company has a strict quality plan and stringent quality assurance system right from the raw material stage to finished product stage.



Feature & Key Properties INVA Pipe:



Virgin Raw Material: Manufactured from High Quality virgin food grade raw material (PE 63, PE 80 and PE 100), Non-toxic and suitable for potable water supply sourced from state-of-the art Raw materials suppliers like Borouge, ONGC etc.



100% Safe for drinking water supply: We have adhered to highest safety norms with anti-microbial properties. Our pipes are free from contamination without allowing the water to get infected. It has excellent performance in aggressive climatic conditions having superior UV resistance.



Quality Commitment: Our leadership team is dedicated towards quality with strict focus on usage of virgin raw material. Team producing best quality pipes driven by management philosophy. Our pipes have excellent service life of more than 50 years.



Ease to handling- Light Weight, telescopic transportation and fast installation at reasonable cost. Monolithic Leak proof Joint done with different HDPE jointing methods.



Higher flow rate & lower frictional loss- Our pipes and fittings have smooth inner walls enhancing high flow with lesser friction loss and superior water hammer resistance.



Corrosion free and maintenance free- Due to superiority in technology, our products are corrosion free and it certainly makes them maintenance free.



Resistant to soil movement- Movement of soil is the major factor that causes damages to pipes and fittings. But our products have got superior impact properties to prevent damage. This feature is added advantage for earthquake prone zone.



Self-extinguish and chemical resistant-

The products remain safe whenever there is accidental fire and side effects of chemicals with low smoke hazards gases.



High tensile and impact strength-

Our products show excellent strength to withstand highest impact during repetitive usages.



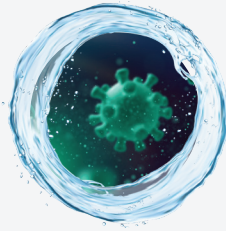
Recyclable- HDPE is recyclable which reduces the plastic waste and production.



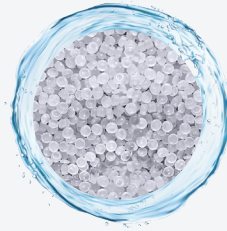
Why INVA?



Corrosion Resistant



Lower Bacterial Growth



100% virgin material



Cost Effective



Fire Safe



Safe for Drinking Water



Easy Installation



Excellent service life

In-House Testing Facilities

Raw Material Test

- Density Test
- Carbon Black Content & Dispersion Test
- Melt Flow Rate Test
- Oxidation Induction Time Test (OIT)



Pipe Tests

- Dimension, Length, Colour, Strip Deification & Visual Appearance Test
- Density Test
- Carbon Black Content & Dispersion Test
- Melt Flow Rate Test
- Internal Pressure Creep Rupture Test of Pipes and Pipe Joints
- Longitudinal Reversion Test
- Overall Migration Test
- Tensile Strength Test for Butt-fusion joint and Elongation at Break Test
- Slow Crack Growth Rate Test
- Oxidation Induction Time Test (OIT)



Pipe Specification:

IS 4984 2016

DIMENSION OF HDPE PIPE AS PER IS 4984:2016																									
Grade of Material				SDR 41		SDR 33		SDR 26		SDR 21		SDR 17		SDR 13.6		SDR 11		SDR 9		SDR 7.4		SDR 6			
				NOMINAL PRESSURE (PN) bar																					
PE 63				PN 2		PN 2.5		PN 3.2		PN 4		PN 5		PN 6		PN 8									
PE 80				PN 2.5		PN 3.2		PN 4		PN 5		PN 6		PN 8		PN 10		PN 12.5		PN 16		PN 20			
PE 100				PN 3		PN 4		PN 5		PN 6		PN 8		PN 10		PN 12.5		PN 16		PN 20					
Nominal Size	OD (mm)		Ovality MM	Wall Thicknesses																					
	MIN	MAX		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX		
16	16.0	16.3	1.2															1.8	2.1	2.2	2.5	2.7	3.1		
20	20.0	20.3	1.2														1.9	2.2	2.3	2.6	2.7	3.1	3.4	3.8	
25	25.0	25.3	1.2												1.9	2.2	2.3	2.6	2.8	3.2	3.4	3.8	4.2	4.7	
32	32.0	32.3	1.3									1.9	2.2	2.4	2.7	2.9	3.3	3.6	4.1	4.4	4.9	5.4	6.0		
40	40.0	40.4	1.4							1.9	2.2	2.4	2.7	3.0	3.4	3.7	4.2	4.5	5.1	5.4	6.0	6.7	7.5		
50	50.0	50.4	1.4					2.0	2.3	2.4	2.7	3.0	3.4	3.7	4.2	4.6	5.2	5.6	6.3	6.8	7.6	8.4	9.3		
63	63.0	63.4	1.5					2.5	2.9	3.0	3.4	3.7	4.2	4.7	5.3	5.8	6.5	7.0	7.8	8.6	9.6	10.5	11.7		
75	75.0	75.5	1.6	1.9	2.2	2.3	2.6	2.9	3.3	3.6	4.1	4.5	5.1	5.6	6.3	6.9	7.7	8.4	9.3	10.2	11.3	12.5	13.9		
90	90.0	90.6	1.8	2.2	2.5	2.8	3.2	3.5	4.0	4.3	4.8	5.3	5.9	6.7	7.5	8.2	9.1	10.0	11.1	12.2	13.5	15.0	16.6		
110	110.0	110.7	2.2	2.7	3.1	3.4	3.8	4.3	4.8	5.3	6.0	6.5	7.3	8.1	9.0	10.0	11.1	12.3	13.6	14.9	16.5	18.4	20.3		
125	125.0	125.8	2.5	3.1	3.5	3.8	4.3	4.8	5.4	6.0	6.7	7.4	8.2	9.2	10.2	11.4	12.7	13.9	15.4	16.9	18.7	20.9	23.1		
140	140.0	140.9	2.8	3.5	4.0	4.3	4.8	5.4	6.0	6.7	7.5	8.3	9.2	10.3	11.4	12.8	14.2	15.6	17.3	19.0	21.0	23.4	25.8		
160	160.0	161.0	3.2	3.9	4.4	4.9	5.5	6.2	6.9	7.7	8.6	9.5	10.6	11.8	13.1	14.6	16.2	17.8	19.7	21.7	24.0	26.7	29.5		
180	180.0	181.1	3.6	4.4	4.9	5.5	6.2	7.0	7.8	8.6	9.6	10.6	11.8	13.3	14.7	16.4	18.1	20.0	22.1	24.4	26.9	30.0	33.1		
200	200.0	201.2	4.0	4.9	5.5	6.1	6.8	7.7	8.6	9.6	10.7	11.8	13.1	14.7	16.3	18.2	20.1	22.3	24.6	27.1	29.9	33.4	36.8		
225	225.0	226.4	4.5	5.5	6.2	6.9	7.7	8.7	9.7	10.8	12.0	13.3	14.7	16.6	18.4	20.5	22.7	25.0	27.6	30.5	33.7	37.5	41.4		
250	250.0	251.5	5.0	6.1	6.8	7.6	8.5	9.7	10.8	12.0	13.3	14.7	16.3	18.4	20.3	22.8	25.2	27.8	30.7	33.8	37.3	41.7	46.0		
280	280.0	281.7	9.8	6.9	7.7	8.5	9.5	10.8	12.0	13.4	14.8	16.5	18.3	20.6	22.8	25.5	28.2	31.2	34.4	37.9	41.8	46.7	51.5		
315	315.0	316.9	11.1	7.7	8.6	9.6	10.7	12.2	13.5	15.0	16.6	18.6	20.6	23.2	25.6	28.7	31.7	35.0	38.6	42.6	47.0	52.5	57.9		
355	355.0	357.2	12.5	8.7	9.7	10.8	12.0	13.7	15.2	16.9	18.7	20.9	23.1	26.1	28.8	32.3	35.6	39.5	43.6	48.0	52.9	59.2	65.2		
400	400.0	402.4	14.0	9.8	10.9	12.2	13.5	15.4	17.0	19.1	21.1	23.6	26.1	29.5	32.6	36.4	40.1	44.5	49.1	54.1	59.6	66.7	73.5		
450	450.0	452.7	15.6	11.0	12.2	13.7	15.2	17.3	19.1	21.5	23.8	26.5	29.3	33	36.5	40.9	45.1	50.0	55.1	60.9	67.1	75.0	82.6		
500	500.0	503.0	17.5	12.2	13.5	15.2	16.8	19.3	21.3	23.9	26.4	29.5	32.6	36.8	40.6	45.5	50.2	55.6	61.3	67.6	74.5	83.4	91.8		

Current Production range 16mm - 250mm

Under Commissioning 250mm - 500mm

ISO 4427

Wall thicknesses AS PER ISO 4427

Grade Materials	Pipe Series																				
	SDR 6		SDR 7.4		SDR 9		SDR 11		SDR 13.6		SDR 17		SDR 21		SDR 26		SDR 33		SDR 41		
	S 2.5		S 3.2		S 4		S 5		S 6.3		S 8		S 10		S 12.5		S 16		S 20		
NOMINAL PRESSURE (PN) bar																					
PE 40	—		PN 10		PN 8		—		PN 5		PN 4		PN 3.2		PN 2.5		—		—		
PE 63	—		—		—		PN 10		PN 8		—		PN 5		PN 4		PN 3.2		PN 2.6		
PE 80	PN 25		PN 20		PN 16		PN 12.5		PN 10		PN 8		PN 6		PN 5		PN 4		PN 3.2		
PE 100	—		PN 25		PN 20		PN 16		PN 12.5		PN 10		PN 8		PN 6		PN 5		PN 4		
Nominal Size	Wall Thicknesses																				
	emin	emax	emin	emax	emin	emax	emin	emax	emin	emax	emin	emax	emin	emax	emin	emax	emin	emax	emin	emax	emin
16	3.0	3.4	2.3	2.7	2.0	2.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
20	3.4	3.9	3.0	3.4	2.3	2.7	2.0	2.3	—	—	—	—	—	—	—	—	—	—	—	—	—
25	4.2	4.8	3.5	4.0	3.0	3.4	2.3	2.7	2.0	2.3	—	—	—	—	—	—	—	—	—	—	—
32	5.4	6.1	4.4	5.0	3.6	4.1	3.0	3.4	2.4	2.8	2.0	2.3	—	—	—	—	—	—	—	—	—
40	6.7	7.5	5.5	6.2	4.5	5.1	3.7	4.2	3.0	3.5	2.4	2.8	2.0	2.3	—	—	—	—	—	—	—
50	8.3	9.3	6.9	8	5.6	6.3	4.6	5.2	3.7	4.2	3.0	3.4	2.4	2.8	2.0	2.3	—	—	—	—	—
63	10.5	11.7	8.6	9.6	7.1	8.0	5.8	6.5	4.7	5.3	3.8	4.3	3.0	3.4	2.5	2.9	—	—	—	—	—
75	12.5	13.9	10.3	11.5	8.4	9.4	6.8	7.6	5.6	6.3	4.5	5.1	3.6	4.1	2.9	3.3	—	—	—	—	—
90	15.0	16.7	12.3	13.7	10.1	11.3	8.2	9.2	6.7	7.5	5.4	6.1	4.3	4.9	3.5	4.0	—	—	—	—	—
110	18.3	20	15.1	16.8	12.3	13.7	10.0	11.1	8.1	9.1	6.6	7.4	5.3	6.0	4.2	4.8	—	—	—	—	—
125	21	23.0	17.1	19.0	14.0	15.6	11.4	12.7	9.2	10.3	7.4	8.3	6.0	6.7	4.8	5.4	—	—	—	—	—
140	23.3	25.8	19.2	21.3	15.7	17.4	12.7	14.1	10.3	11.5	8.3	9.3	6.7	7.5	5.4	6.1	—	—	—	—	—
160	26.6	29.4	21.9	24.2	17.9	19.8	14.6	16.2	11.8	13.1	9.5	10.6	7.7	8.6	6.2	7.0	—	—	—	—	—
180	29.9	33.0	24.6	27.2	20.1	22.3	16.4	18.2	13.3	14.8	10.7	11.9	8.6	9.6	6.9	7.7	—	—	—	—	—
200	33.2	36.7	27.4	30.3	22.4	24.8	18.2	20.2	14.7	16.3	12	13.2	9.6	10.7	7.7	8.6	—	—	—	—	—
225	37.4	41.3	30.8	34.0	25.2	27.9	20.5	22.7	16.6	18.4	13.4	14.9	10.8	12.0	8.6	9.6	—	—	—	—	—
250	41.5	45.8	34.2	37.8	27.9	30.8	22.7	25.1	18.4	20.4	14.8	16.4	11.9	13.2	9.6	10.7	—	—	—	—	—
280	46.5	51.3	38.3	42.3	31.3	34.6	25.4	28.1	20.6	22.8	16.6	18.4	13.4	14.9	10.7	11.9	—	—	—	—	—
315	52.3	57.7	43.1	47.6	35.2	38.9	28.6	31.6	23.2	25.7	18.7	20.7	15.0	16.6	12.1	13.5	9.7	10.8	7.7	8.6	—
355	59.0	65.0	48.5	53.5	39.7	43.8	32.2	35.6	26.1	28.9	21.1	23.4	16.9	18.7	13.6	15.1	10.9	12.1	8.7	9.7	—
400	—	—	54.7	60.3	44.7	49.3	36.3	40.1	29.4	32.5	23.7	26.2	19.1	21.2	15.3	17.0	12.3	13.7	9.8	10.9	—
450	—	—	61.5	67.8	50.3	55.5	40.9	45.1	33.1	36.6	26.7	29.5	21.5	23.8	17.2	19.1	13.8	15.3	11.0	12.2	—
500	—	—	—	—	55.8	61.5	45.4	50.1	36.8	40.6	29.7	32.8	23.9	26.4	19.1	21.2	15.3	17.0	12.3	13.7	—

Current Production range 16mm - 250mm
 Under Commissioning 250mm - 500mm

AS PER ISO 14885

Wall thicknesses AS PER ISO 14885				
Nominal Outside Diameter, mm	Minimum Wall Thickness (e _{min}) mm			
<i>Diameter</i>	SDR 17.6	SDR 13.6	SDR 11.0	SDR 9
16	2.3	2.3	3.0	3.0
20	2.3	2.3	3.0	3.0
25	2.3	2.3	3.0	3.0
32	2.3	2.3	3.0	3.6
40	2.3	3.0	3.7	4.5
50	2.9	3.7	4.6	5.6
63	3.6	4.7	5.8	7.1
75	4.3	5.5	6.8	8.4
90	5.2	6.6	8.2	10.1
110	6.3	8.1	10.0	12.3
125	7.1	9.2	11.4	14.0
140	8.0	10.3	12.7	15.7
160	9.1	11.8	14.6	17.9
180	10.3	13.3	16.4	20.1
200	11.4	14.7	18.2	22.4
225	12.8	16.6	20.5	25.1
250	14.2	18.4	22.7	27.9
280	16.0	20.6	25.4	31.3
315	17.9	23.2	28.6	35.2
355	20.2	26.1	32.3	39.7
400	22.8	29.4	36.4	44.7
450	25.6	33.1	41.0	50.3
500	28.5	36.8	45.5	55.8

IS : 14333 – 1996 – PE 100

Dimensions of HDPE Pipe as per IS : 14333 – 1996 – PE 100										
Nominal OD (mm)	PN6		PN8		PN10		PN12.5		PN16	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
63	3.6	4.2	4.7	5.4	5.8	6.6	7.0	7.9	8.7	9.8
75	4.3	5.0	5.6	6.4	6.9	7.8	8.4	9.5	10.4	11.7
90	5.1	5.9	6.7	7.6	8.2	9.3	10.0	11.2	12.5	14.0
110	6.3	7.2	8.2	9.3	10.0	11.2	12.3	13.8	15.2	17.0
125	7.1	8.1	9.3	10.5	11.4	12.8	13.9	15.5	17.3	19.3
140	8.0	9.0	10.4	11.7	12.8	14.3	15.6	17.4	19.4	21.6
160	9.1	10.3	11.9	13.3	14.6	16.3	17.8	19.8	22.1	24.6
180	10.2	11.5	13.4	15.0	16.4	18.3	20.0	22.2	24.9	27.6
200	11.4	12.8	14.9	16.6	18.2	20.3	22.3	24.8	27.6	30.6
225	12.8	14.3	16.7	18.6	20.5	22.8	25.0	27.7	31.1	34.5
250	14.2	15.9	18.6	20.7	22.8	25.3	27.8	30.8	34.5	38.2
280	15.9	17.7	20.8	23.1	25.2	28.3	31.2	34.6	38.7	42.8
315	17.9	19.9	23.4	26.0	28.7	31.8	35.0	38.7	43.5	48.1
355	20.1	22.4	26.3	29.2	32.3	35.8	39.5	43.7	49.0	54.1
400	22.7	26.4	29.7	34.4	36.4	42.1	44.5	51.4	55.2	63.7
450	25.5	29.6	33.4	38.7	41.0	47.4	50.0	57.7		
500	28.4	32.9	37.1	42.9	45.5	52.6	55.6	64.2		

Current Production range 16mm - 250mm

Under Commissioning 250mm - 500mm

Applications:



Drinking Water Supply



Sewerage and Storm Water Drainage



Gas Pipe



Disposal of Industrial Effluent



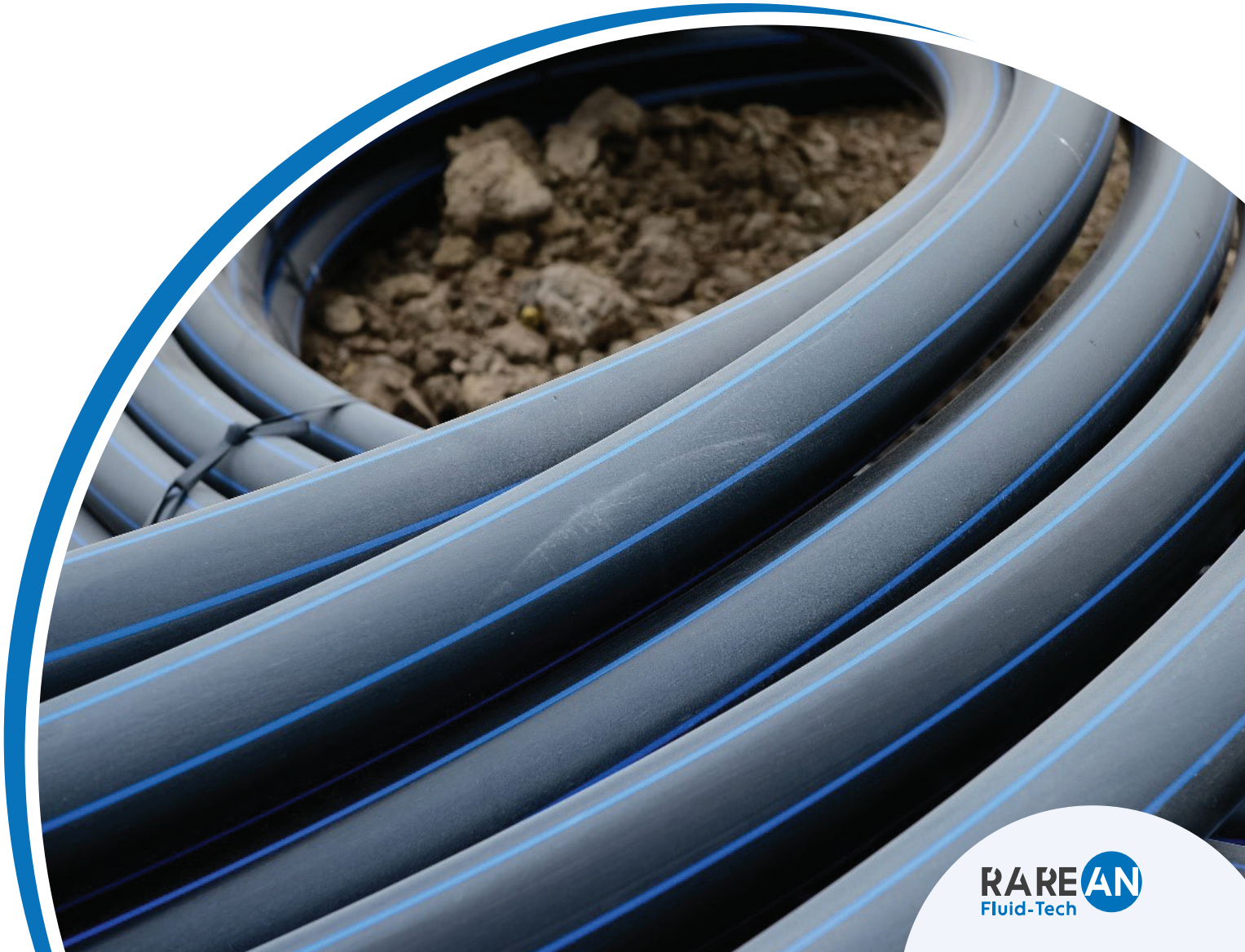
Desalination and other off-shore installation



Irrigation



Dredging and Land Reclamation



Locate us:



Corporate Office: 417, 4th Floor, Esplanade Mall -1,
Rasulgarh, Bhubaneshwar - 751010



Registered Office: 605, 'A' Wing, Marathon Futurex, Lower
Parel (E), Mumbai, Maharashtra - 400013.



Plant Address: Plot No. 26/2, 33 to 37, 43 (P), 44 & 45,
Jaymangal Industrial Estate, Khordha, Odisha

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