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ADVANTAGE OF RPM PIPE

The RPM Pipe is composed of inner layer, wound layer, resin mortar layer and exterior corrosion-resistant layer. Compared with the pure FRP Pipe, the RPM Pipe not only has property of lightweight and high strength, but also possess high stiffness as the buried pipe and low cost.

CHARACTERISTIC OF RPMP

1. Lightweight, High Strength and High Stiffness
2. Corrosion-Resistant Property
3. Good Hydraulic Property
4. Health property of RPMP pipe
5. Shock Resistance
6. Abrasive resistance
7. Low temperature resistant property
8. Compliance againts the environment

SPECIFICATION OF RPM PIPE
(STANDARD CODE OF DESIGN D3517)

1. Nominal Diameter : DN25 ~ DN4000
2. Pressure Class : 2.5 Bar ~ 25 Bar
3. Working Pressure : 2.5 Bar ~ 25 Bar
4. Stiffness Classes : 2,500 N/m2, 5,000 N/m2, 10,000 N / m2
5. Length of pipe : 12 meters per piece
6. Type of Joint :
   a. Socket-spigot with double "O" seal rings
   b. Flange joint
   c. Butt-joint
   d. Socket-spigot with adhesive
7. Barcol Hardness : >40
8. Inner surface roughness coefficient : 0.0084

STRUCTURE LAYER OF RPMP

PROPERTY COMPARISON BETWEEN RMP AND THE DIFFERENT PIPES

ITEM	MATERIAL				
	RPMP	PCCP	PCB	SP	NCIP
Water Conveying capacity [M3/s]	6.8	6.8	6.8	6.8	6.8
Roughness coefficient	0.0084	0.013	0.013	0.011	0.011
Diameter [mm]	2,000	2,400	2,400	2,200	2,200
Length per piece [m]	12	6	4	2200	5
Life [Year]	50~70	< 50	30	10~20	30
Inner pressure Resistant capacity [Mpa]	0.6	0.4	0.6	0.6	0.6
External pressure Resistant capacity [Mpa]	Soil coverage depth 6m	Soil coverage depth 6m	Soil coverage depth 6m	Soil coverage depth 6m	Soil coverage depth 6m
Leakprofness	Good	Good in cylinder	So so	Good	Good
Corrossion Resistant	Excelent	Need treatment Cathode protection	Need treatment Cathode protection	Poor	Poor
Safety	Not to Pollute Water	Not to Pollute Water	Not to Pollute Water	Stain, to pollute water	Stain, to pollute water
Reference	JC/T838-1998	AWWA C304	AWWA C301	GBJ69-84	GB5696-94
Type of Joint	Double seal rings socket and spigot	gle seal ring socket a	Flexible seal ring	Welding	Socket and spigot
Joint w hether can be deflected	OK 3 degrees	OK 3 degrees	NO	~	~
Quantity of Joint	one per 12 m	one per 6 m	one per 4 m	Many	one per 8 m
Joint w hether can be performed	OK	NO	NO	NO	NO
Installation speed	Very fast	Medium	Slow	Slow	Medium
Explosion phenomenon	No	Yes	Yes	Yes	Yes
Convenient degree of reparation	Easy	Difficult	Difficult	Difficult	Difficult

COMPARISON OF DIFFERENT KIND OF PIPE IN ECONOMY

ITEM	SYMBOL	UNIT	RPMP	PCCP	PCP	SP	NCIP
Conveying capacity Qm3/s	Q	m3/s	6.8	6.8	6.8	6.8	6.8
Diamete	DN	mm	2,000	2,400	2,400	2,200	2,200
Roughness Coefficientr	n	UNIT	0.0084	0.013	0.013	0.011	0.011
Pressure	P	Bar	6	6	6	6	
Weight	W	Kg/m	420	3500	4320	1218	
Life		Year	50~70	<50	30	10~20	<50

Note:

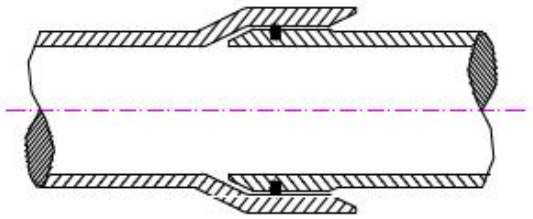
RPMP : Reinforced Plastics Mortar Pipe
PCCP : Pretensioned Concrete Casing pipe
PCP : Pretensioned Concrete Pipe
SP : Steel Pipe
NCIP : Nodular Cast Iron Pipe

PRODUCT DIMENSION

Thickness of RPMP (mm)

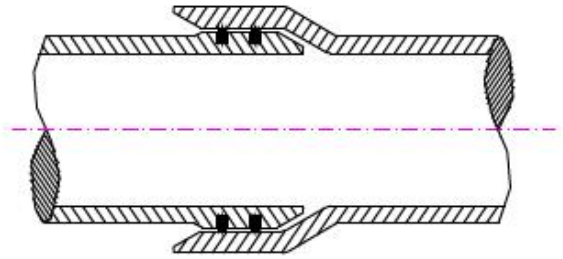
Stiffnes / Pressure / Diameter (mm)	SN2,500			SN5,000			SN10,000			
	Bar			Bar			Bar			
	2.0	6.0	10.0	2.0	6.0	10.0	2.0	6.0	10.0	16.0
125					5.3	5.9		5.3	5.9	5.9
150					5.3	5.9		5.3	5.9	5.9
200					5.3	6.2		6.2	6.2	6.2
250					5.3	7.20		6.2	7.2	7.20
300					5.3	7.20		7.2	7.2	7.20
350					5.3	7.60		8.2	8.2	7.60
400					5.3	7.60		8.5	8.2	7.60
500	7.10	7.2	7	8.8	9.0	8.60	11.1	11.3	10.6	9.20
600	8.40	8.6	8.3	10.5	10.8	10.00	13.4	13.4	12.4	11.90
700	9.80	9.6	8.3	12.3	11.9	11.50	15.5	15.1	14.2	13.40
800	11.20	10.7	9.8	14	13.3	12.90	17.8	16.8	16.1	14.90
900	12.50	11.9	10.8	15.8	15.5	14.20	20	19	17.8	16.70
1000	13.90	13.2	12.3	17.5	16.6	15.80	22.2	21.2	19.7	18.20
1100	15.40	14.5	13.6	19.3	18.3	17.20	24.6	23.4	21.7	20.80
1200	16.60	15.5	14.5	21	19.6	18.60	26.8	25	23.3	21.80
1300	18.10	16.7	15.6	22.9	21.5	20.00	29.2	26.9	25.6	23.60
1400	19.50	17.7	15.4	24.6	22.4	21.50	31.2	28.6	27.0	25.50
1500	20.70	19	17.7	26.1	24.4	23.50	33.3	30.4	29.6	27.10
1600	21.80	20.5	19.2	27.8	26.6	24.50	35.4	33.3	31.0	28.90
1800	24.60	20.6	20.4	31.3	28.8	26.80	39.9	34.9	34.1	31.30
2000	27.40	25.4	23.4	35	32.4	29.60	44.7	38.2	37.3	36.10
2200	29.70	27.6	25.3	37.8	35.3	32.60	46.7	42.5	41.5	40.40
2400	32.60	30.3	28.4	41.8	38.8	34.60	53.4	45.8	44.6	42.80
2600	36.30	33.5	31.5	45.2	37.5	35.40	55.8	48.9	47.2	45.60
2800	39.30	36	34	49.4	45.1	42.00	62	56.5	53.0	51.00
3000	41.00	38.1	36.2	52	47.0	45.30	67	61.7	58.2	54.00
3200	47.10	41.4	39.5	56.6	49.2	46.30	69.9	62.9	59.4	-
3400	50.00	43.7	41.6	59.9	52.0	49.30	74.5	64.2	60.6	-
3600	52.50	46.2	44.2	62.7	55.1	52.00	77.6	68.5	63.9	-
3800	55.50	48.6	46.3	66.6	57.8	54.50	82.5	71.9	67.0	-
4000	58.30	50.9	48.6	69.8	61.0	57.60	86.7	75.5	71.0	-

TYPE OF PIPELINE JOINTS



Socket-spigot joint with single seal ring

It is suitable for medium and low preasure in buried line



Socket-spigot joint with double seal ring

It is suited to high preasure in buried line

INSTALLATION MANUAL

ABOVE GROUND

To minimize the deflection of RPM Pipe the spacing between support should be determined. Make sure the support has a proper wide-band. The supporting point should be near the joint area to avoid the concentrated stress near the joint area and every valve should be supported properly.

UNDER GROUND

Trench design and exavation should meet the technical requirement of RPM Pipe instalation. Pipe zone backfill should consisit of sound earth or granular material free of stones or lumps. The material should not contain vegetation or debris that could leave voids upon decomposition. Granular materials such as sand, gravel or crushed rock yield high densities with a minimum of compaction effort and have proven ideal for the pipe zone backfill.