



VITRIFIED CLAY PIPE

Quality Connecting Ahead

Innovative Trenchless Technology
Sustainable Sewage Pipe Products & Materials



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LEADING AHEAD THE MARKET

" Think of Clay , Think of Us "

ABOUT US

Since its inception in 1935, Johore Pipe Company has expanded its operations to encompass a varied product range of vitrified clay pipes designed for sewage, drainage, industrial & commercial application. The company is proud to have undertaken Malaysia's first sewerage project undertaken by the Kuala Lumpur Municipality, and Singapore's first sewerage works in 1952.

In 1983, JPC-Intan Sdn Bhd ("JPC-Intan") is established to undertake major sewage projects. JPC-Intan has gained the distinction of producing the largest pipes (with a diameter of 700mm) in the ASEAN region in year 2005.

JPC-intan ensures that products are technically appropriate and superior for today's demanding construction environment. Controlled blending of clays and state of the art manufacturing processes have contributed to the production of vitrified clay pipes of the highest quality in terms of strength, durability, weight to length ratio and dimensional accuracy.

The design of the jointing system for our vitrified clay pipes ensures that it is economical to install, operate and maintain with considerably less wastage of materials and time at site.

Benefits of our jointing system

- ① Fast, easy and efficient installation
- ② Heat and chemical resistant
- ③ Provides excellent and sufficient interlock at the joint
- ④ Improves productivity
- ⑤ Minimal wastage at site
- ⑥ Easy adjustment

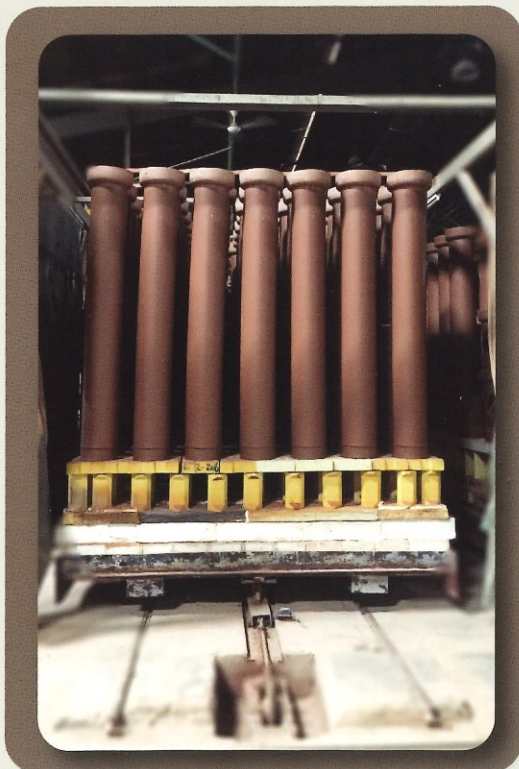


CREATIVE INNOVATIVE TEAMWORK



Why JPC-INTAN Vitrified Clay Pipe

- 1 Produced from clay and is fired up to vitrification state to last over lifetime.
- 2 Compliances to **EN295, CIDB, SPAN, SIRIM and ISO 9001 : 2015**
- 3 Spacious plant premises for raw materials & finished VCP pipes storing.
- 4 Comprehensive Inhouse testing facilities with technology from Europe, Japan & Australia.
- 5 Committed to high quality products for ease of installation.
(Jo-Link & Jo-Flex)
- 6 State of the art extruders, firing kilns & equipment from Japan, Germany,UK and Australia.
- 7 Committed to superior product quality with product liability insurance .



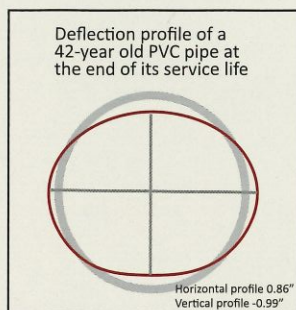
Why Specify Clay Pipe ?

Over the long-term, VCP is the best value.

A demonstrated service life of over 200-years in the U.S. is the longest proven service life in the industry.

The natural properties of VCP make it uniquely suited to the high-sulfur, highly-abrasive and highly-demanding environment of a sanitary sewer.

Material Properties

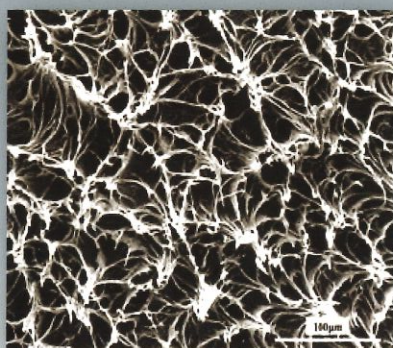


(Source from ncpi.org)
National Clay Pipe Institute

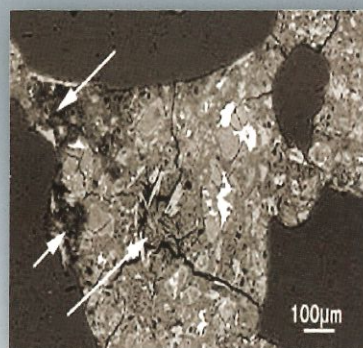
- V C P is unaffected by age, light or chemicals.
- Comparatively, plastics degrade over time and become brittle as the material ages, resulting in substantial loss of tensile strength, deflection and ultimately pipe collapse.
- As a kiln-fired ceramic, VCP is naturally inert. It does not change over time.

Natural material longevity and expanded maintenance options combine to deliver the best long-term value in sanitary sewer pipe. Municipalities consistently prioritize long-term value over short-term cost.

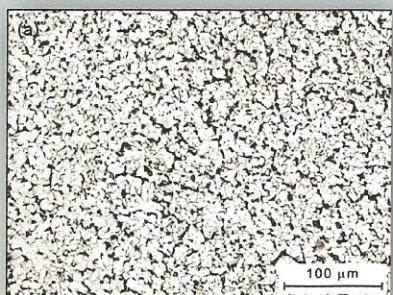
MICROSTRUCTURE COMPARISON AT 100 MICRON



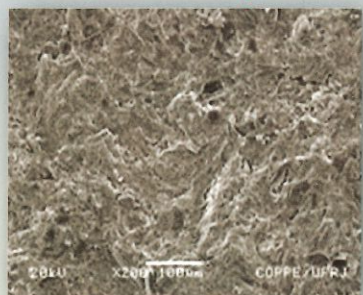
Plastic Pipe



Concrete Pipe



Steel Pipe



Clay Pipe

PERMANENT BOND JOINTING SYSTEM

Complimented with technologies from Europe and Japan, JPC-Intan's **Vitrified Clay Pipes (VCP)** and fittings are supplied in 2 jointing systems, Jo-Flex or Jo-Link, complying with **MS1061** and **EN295**



Jo-link (Rubber ring)

-good elasticity that provided excellent & sufficient interlock of socket to spigot.



Jo-Flex joint (Polyurethane-PU)

-high elastomer substance that resists to heat and chemical.

Product Range & Joint Availability

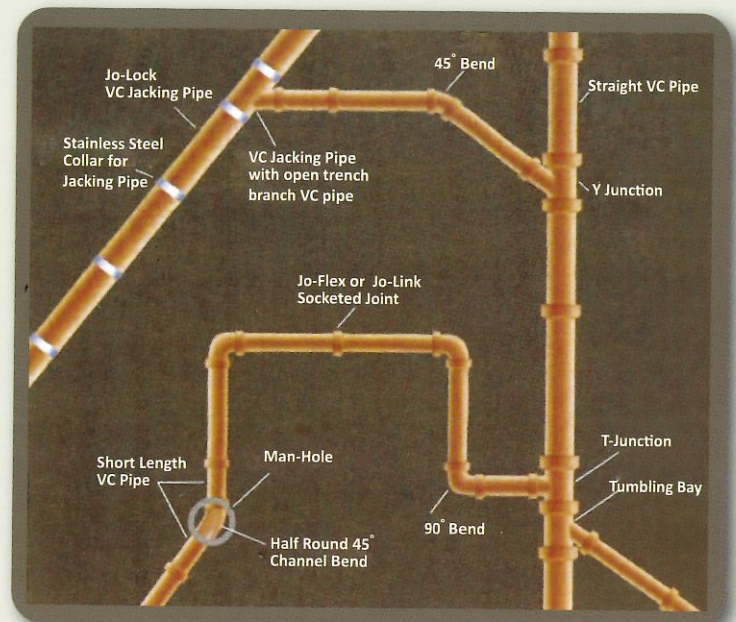
Nominal Size (DN)	Joint System		Standard Length (m)
	Jo-Flex	Jo-Link	
DN 150		✓	(1.25) (1.50)
DN 200		✓	2.00
DN 225		✓	
DN 250		✓	
DN 300		✓	
DN 375	✓	✓	
DN 400	✓		
DN 450	✓	✓	
DN 500	✓		
DN 600	✓		

Remarks : Other lengths and fittings available upon request.

SIMPLIFIED DIRECTION

JPC-Intan's Vitrified Clay Pipes (VCP) and fittings have a high density, strong and impervious body which is achieved through careful selection and blending of the clays, with high extrusion pressures and precise temperature control throughout the firing process.

In view with their high strength, pipe laying shall comply with EN1610.



Overview of the piping system

Installation Method



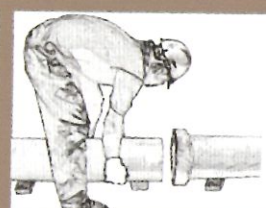
1. Transfer



2. Clean



3. Lubricate



4. Align



5. Jack



Installation of JPC Intan Socket Pipe at jobsite



Installation of JPC Intan Jacking Pipe at jobsite



OUR PRODUCT RANGE

STRAIGHT PIPE

- Straight / Bend Pipe
- Junction T & Y
- Backdrop / Curved Square
Tumbling Bay
- Double T & Y Junction
- Saddle T & Y

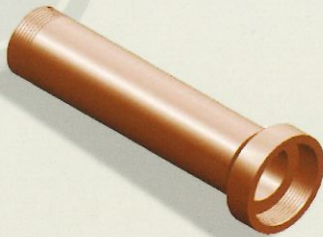
CHANNEL

- Straight Channel
- Channel Bend
- Channel Junction

○ JACKING PIPE

○ ACCESSORIES

STRAIGHT PIPE



VCP STRAIGHT PIPE

Product Range

		Pipe Size									
		DN150	DN200	DN225	DN250	DN300	DN375	DN400	DN450	DN500	DN600
Standard Length (m)		1.25m 1.50m	2.00m								
C R U S H I N G S T R E N G T H	FN28	✓									
	FN34	✓									
	C120		✓	✓	✓	✓	✓	✓	✓	✓	✓
	C160		✓	✓	✓	✓	✓	✓	✓		

Remark : Other lengths and crushing strength are available upon request

VCP BEND PIPE



Bend 45°



Bend 90°

Product Range

		Pipe Size									
		DN150	DN200	DN225	DN250	DN300	DN375	DN400	DN450	DN500	DN600
One Piece	45°	✓									
	90°	✓									
Segmented	45°		✓	✓	✓	✓	✓	✓	✓	✓	✓
	90°		✓	✓	✓	✓	✓	✓	✓	✓	✓

Remark : Degree of bend at 11.25°, 15°, 22.5°, 30°, 60° are available upon request

BACKDROP / CURVED SQUARE TUMBLING BAY



Backdrop



Curved Square



Tumbling Bay

T & Y JUNCTION



T Junction



Y Junction

Product Range

Branch Barrel		Pipe Size for Branch									
		DN 150	DN 200	DN 225	DN 250	DN 300	DN 375	DN 400	DN 450	DN 500	DN 600
Pipe Size for Main Barrel	DN 150	✓									
	DN 200	✓	✓								
	DN 225	✓	✓	✓							
	DN 250	✓	✓	✓	✓						
	DN 300	✓	✓	✓	✓	✓					
	DN 375	✓	✓	✓	✓	✓	✓				
	DN 400	✓	✓	✓	✓	✓	✓	✓			
	DN 450	✓	✓	✓	✓	✓	✓	✓	✓		
	DN 500	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	DN 600	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

DOUBLE T & Y JUNCTION



Double T



Double Y

Product Range

Branch Barrel		Pipe Size for Branch				
		DN 150	DN 200	DN 225	DN 250	DN 300
Pipe Size for Main Barrel	DN 150	✓				
	DN 200	✓	✓			
	DN 225	✓	✓	✓		
	DN 250	✓	✓	✓	✓	
	DN 300	✓	✓	✓	✓	✓

Remark : Other sizes of junction are available upon request

STRAIGHT CHANNEL



VCP CHANNEL

Product Range

	Pipe Size			
	DN 150	DN 200	DN 225	DN 300
Standard Length (m)	0.61m 0.91m	0.5m , 1.00m		
Availability	✓	✓	✓	✓

Remark : Other lengths (up to 2m) and channel sizes (up to DN600) are available upon request

CHANNEL BEND



Product Range

		Pipe Size			
		DN 150	DN 200	DN 225	DN 300
One piece	45°	✓			
	90°	✓			
Segmented	45°		✓	✓	✓
	90°		✓	✓	✓

Remark : Degree of bend at 11.25°, 15°, 22.5°, 30°, 60° are available upon request

CHANNEL JUNCTION (T & Y)



Channel Junction T



Channel Junction Y

Product Range

Branch Barrel		Pipe Size for Branch			
		DN 150	DN 200	DN 225	DN 300
Pipe Size for Main Barrel	DN 150	✓			
	DN 200	✓	✓		
	DN 225	✓	✓	✓	
	DN 300	✓	✓	✓	✓

Remark : Other channel sizes (up to DN600) are available upon request

SADDLE T & Y



Product Range

Branch Barrel		Pipe Size for Branch				
		DN 150	DN 200	DN 225	DN 250	DN 300
Pipe Size for Main Barrel	DN 150	✓				
	DN 200	✓	✓			
	DN 225	✓	✓	✓		
	DN 250	✓	✓	✓	✓	
	DN 300	✓	✓	✓	✓	

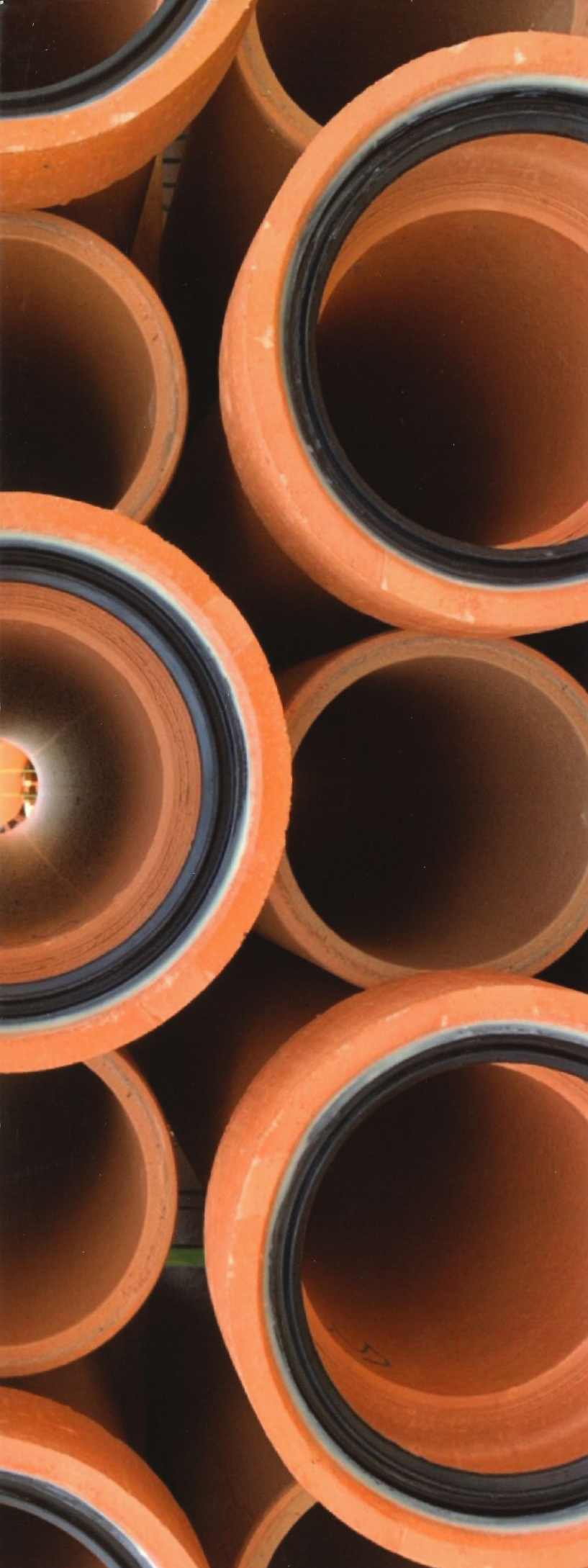
Remark : Other sizes are available upon request

CRUSHING STRENGTH / STANDARDS AND REGULATIONS

JPC-Intan's VCP and fittings are complied with **MS 1061 & EN295**

(Vitrified Clay Pipes and Fittings and Pipe Joints for Drains and Sewers)

Nominal Size	EN295-1 : 2013 & MS 1061		
	Minimum Crushing Strength(F_N), kN/m		
DN 150	28	34	40
Nominal Size	Class		
	95	120	160
DN 225	21	28	36
DN 250	24	30	40
DN 300	29	36	48
DN 375	36	45	60
DN 400	38	48	64
DN 450	43	54	72
DN 500	48	60	80
DN 600	57	72	96



JPC - INTAN

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