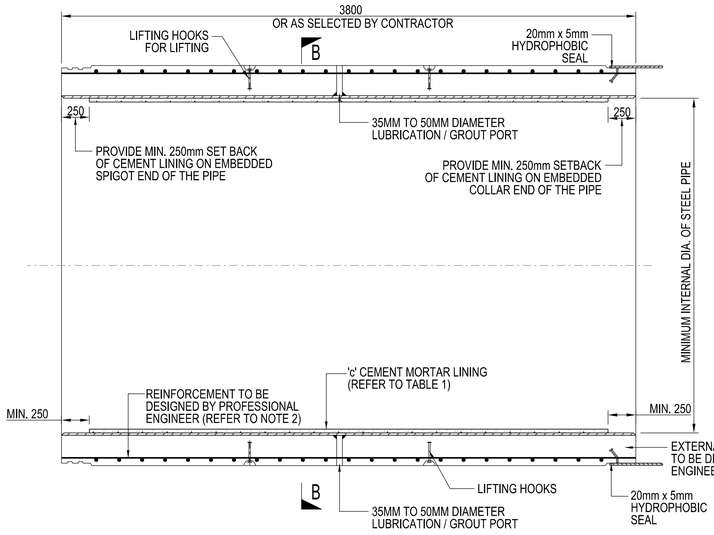
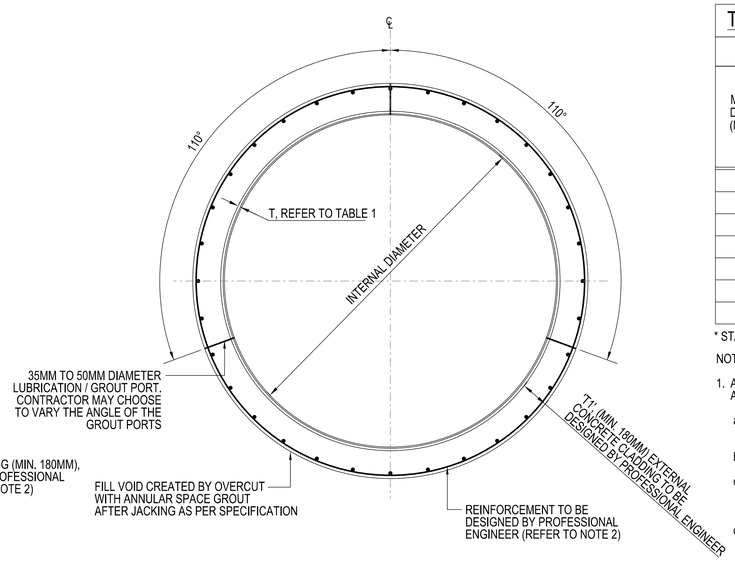


COMPOSITE PIPE FOR PIPE JACKING



SECTION B - B

TABLE 1 (FOR PIPE JACKING)

COMPOSITE PIPES					
MAIN PIPE DIAMETER (NOMINAL) (mm)	'T1', THICKNESS OF EXTERNAL CONCRETE CLADDING (MIN) (mm)	'T', THICKNESS OF STEEL PIPE (mm)	'c', THICKESS OF CEMENT MORTAR LINING (mm)	'Tc', THICKNESS OF INTERNAL SPLIT COLLAR (mm)	'c1', THICKESS OF CEMENT MORTAR LINING AT SPLIT COLLAR (mm)
1200	180	15.9	19	12.7	6.3*
1400	180	15.9	25	15.9	9.1
1600	180	15.9	25	15.9	9.1
1800	180	15.9	25	15.9	9.1
1900	180	15.9	25	15.9	9.1
2000	180	19	25	15.9	9.1
2200	180	19	25	15.9	9.1

* STAINLESS STEEL WIRE MESH TO BE PROVIDED IN CEMENT MORTAR LINING ACROSS THE SPLIT COLLAR

NOTES:

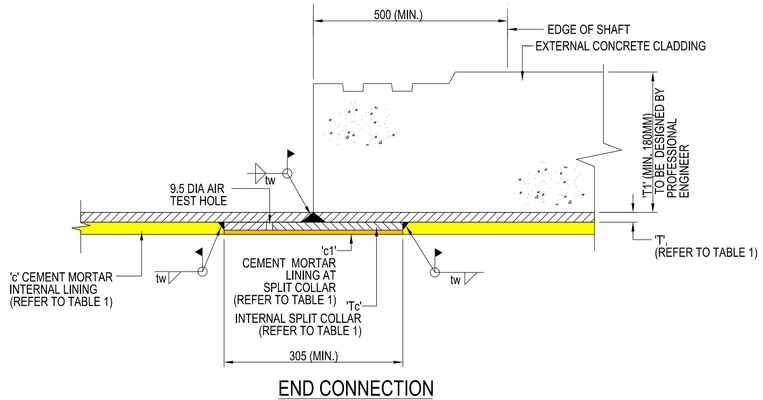
1. A PROFESSIONAL ENGINEER (P.E.) NEED TO DESIGN THE EXTERNAL CLADDING AROUND THE STEEL PIPE FOR PIPE JACKING:
   a) ALL JACKING FORCES SHALL BE ASSUMED TO BE TRANSFERED TO THE EXTERNAL CLADDING ONLY.
   b) JACKING FORCE SHALL BE MULTIPLIED BY A MINIMUM SAFETY FACTOR OF 2.
   c) RC CLADDING FOR PIPE LAID BY PIPE JACKING SHALL BE OF C50/60 CONCRETE GRADE PORTLAND BLAST FURNACE CEMENT (PBFC) SHALL BE USED IN THE CONCRETE FOR THE EXTERNAL RC CLADDING .
   d) THE USE OF PBFC SHALL COMPLY WITH BS EN 15743 AND SS EN 197-1:2014 CONTAINING 20-34% OF CLINKER AND 66-80% OF BLAST FYRNACE SLAG:

MAIN TYPE	COMPOSITION (PERCENTAGE BY MASS)		
	MAIN CONSTITUENTS		MINOR ADDITIONAL CONSTITUENTS
	CLINKER	BLAST-FURNACE SLAG	
	K	S	
CEM III	20-34	66-80	0-5

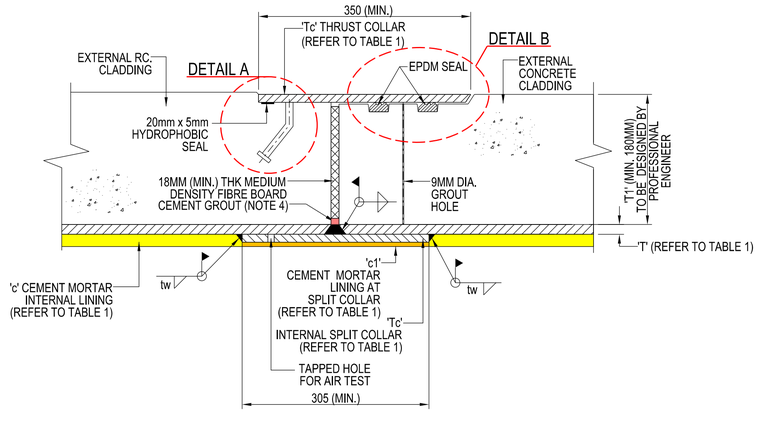
   e) CONCRETE COVER TO STEEL REINFORCEMENT SHALL BE 50mm.
2. THE LIFTING SYSTEM FOR THE COMPOSITE JACKING PIPE SHALL BE DESIGNED BY THE CONTRACTOR'S P.E.

NOTES:

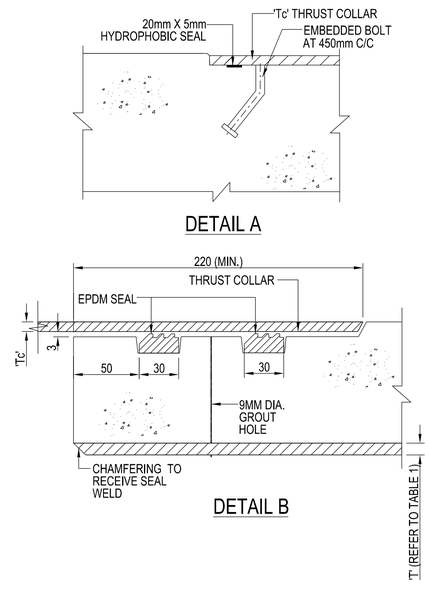
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. REFER TO THE GENERAL NOTES IN DRAWING NO. PUB/WSN/GN/001.
3. GAP SHALL BE FILLED WITH CEMENT GROUT BEFORE WELDING OF INTERNAL SPLIT COLLAR.
4. AFTER COMPLETION OF WELDING OF THE INTERNAL SPLIT COLLARS, THE JOINT SHALL BE LINED INTERNALLY WITH EITHER CEMENT MORTAR OR SPECIAL LINING. THE LINING AROUND THE JOINT SHALL BE PROFILED SMOOTHLY TO MATCH LINING OF THE STEEL PIPE.
5. THE AIR TEST HOLE SHALL BE FULLY SEALED AFTER SUCCESSFUL AIR TEST OF THE PIPE JOINT.
6. 'tw' SHALL NOT BE LESS THAN 'T'.
7. MAXIMUM DEFLECTION ANGLE SHALL BE LESS THAN 0.5 DEGREE.



END CONNECTION



INTERMEDIATE JOINT



ISSUED : NOV 2020	SCALE	**RC. CLADDING DETAILS FOR COMPOSITE PIPES FOR PIPE JACKING**
LAST REVIEWED : NOV 2020	NTS	PUB SINGAPORE'S NATIONAL WATER AGENCY WATER SUPPLY(NETWORK) DEPARTMENT DRAWING NO. **PUB/WSN/STD/202A**