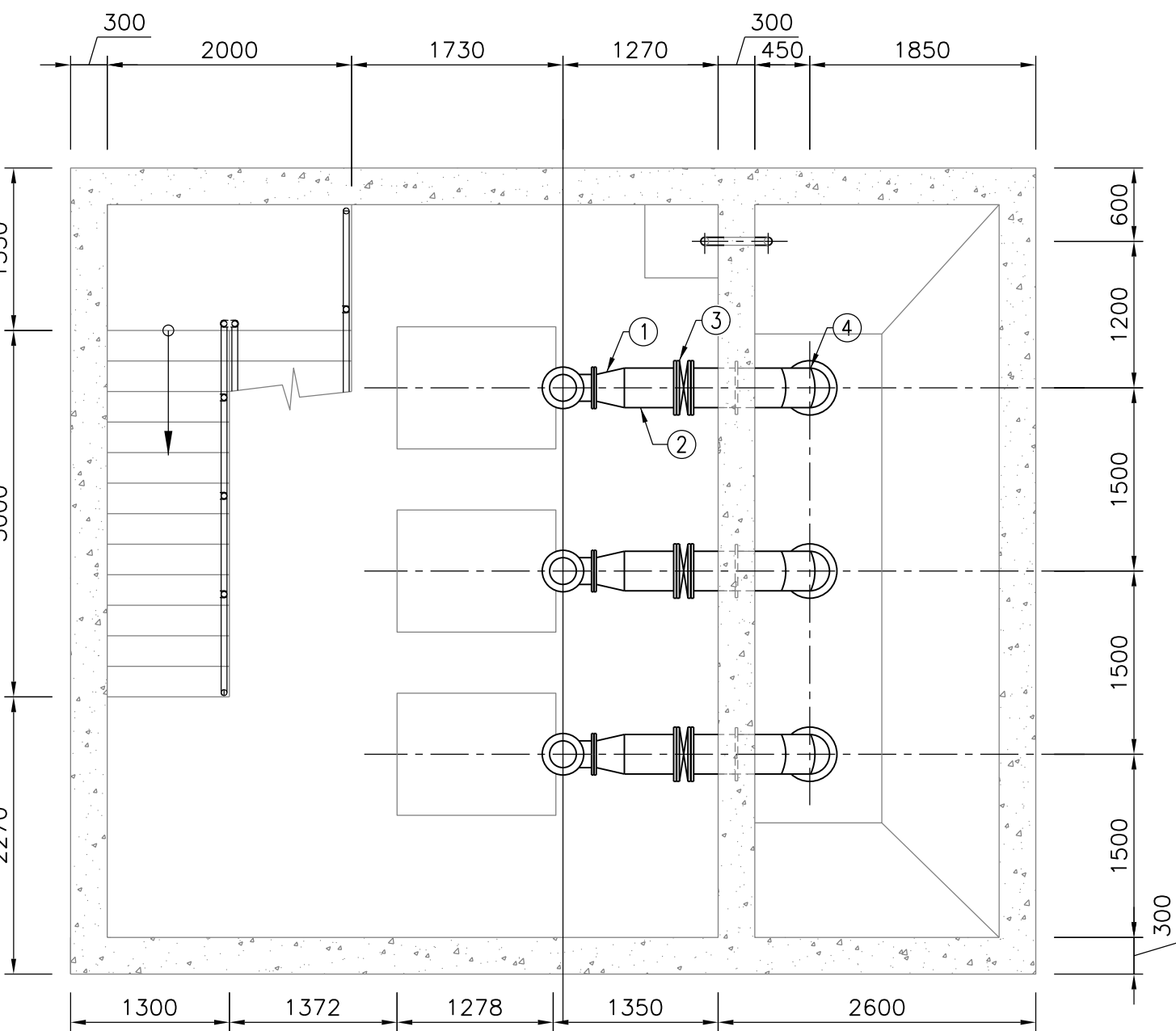
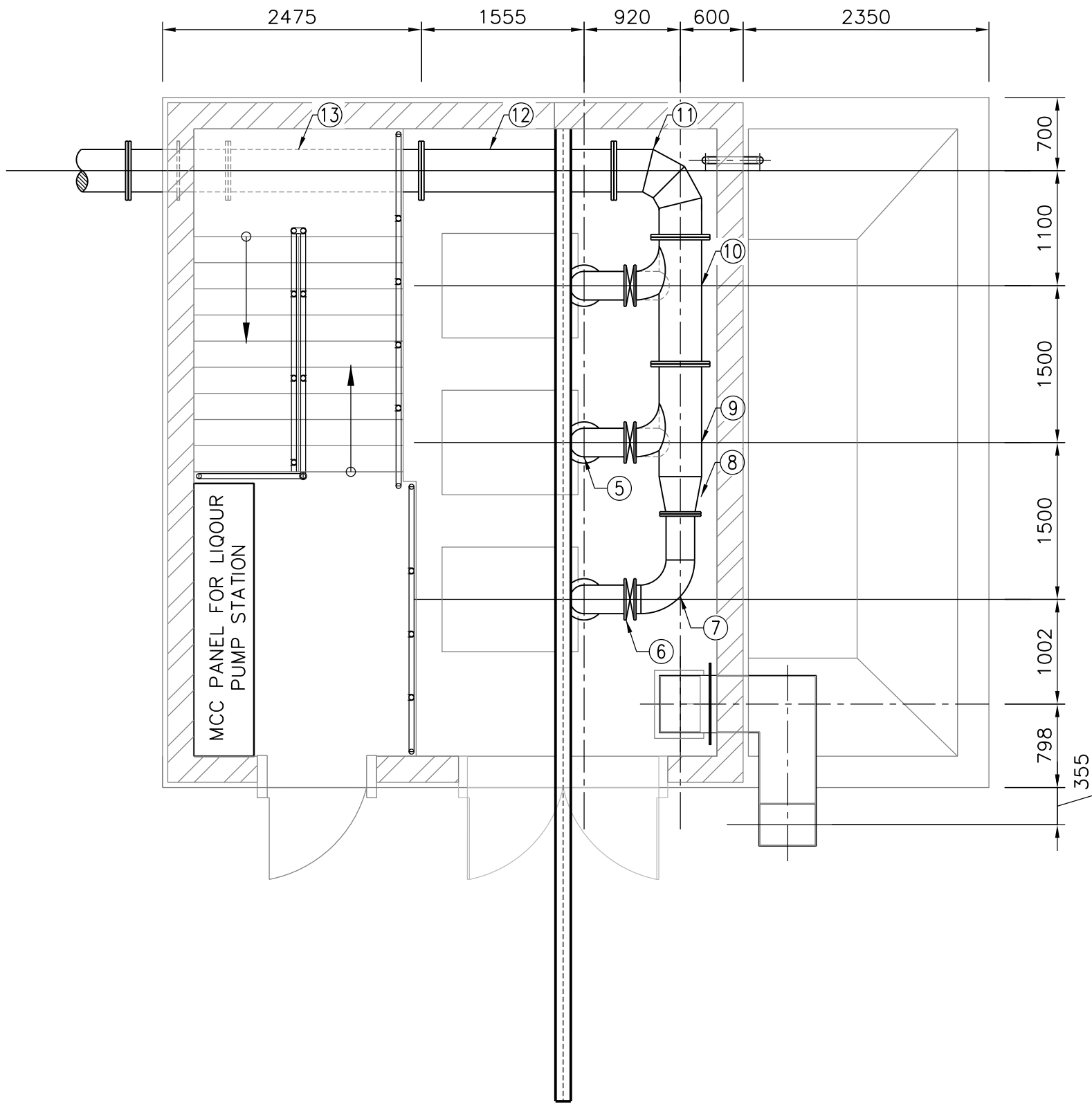


NOTES:

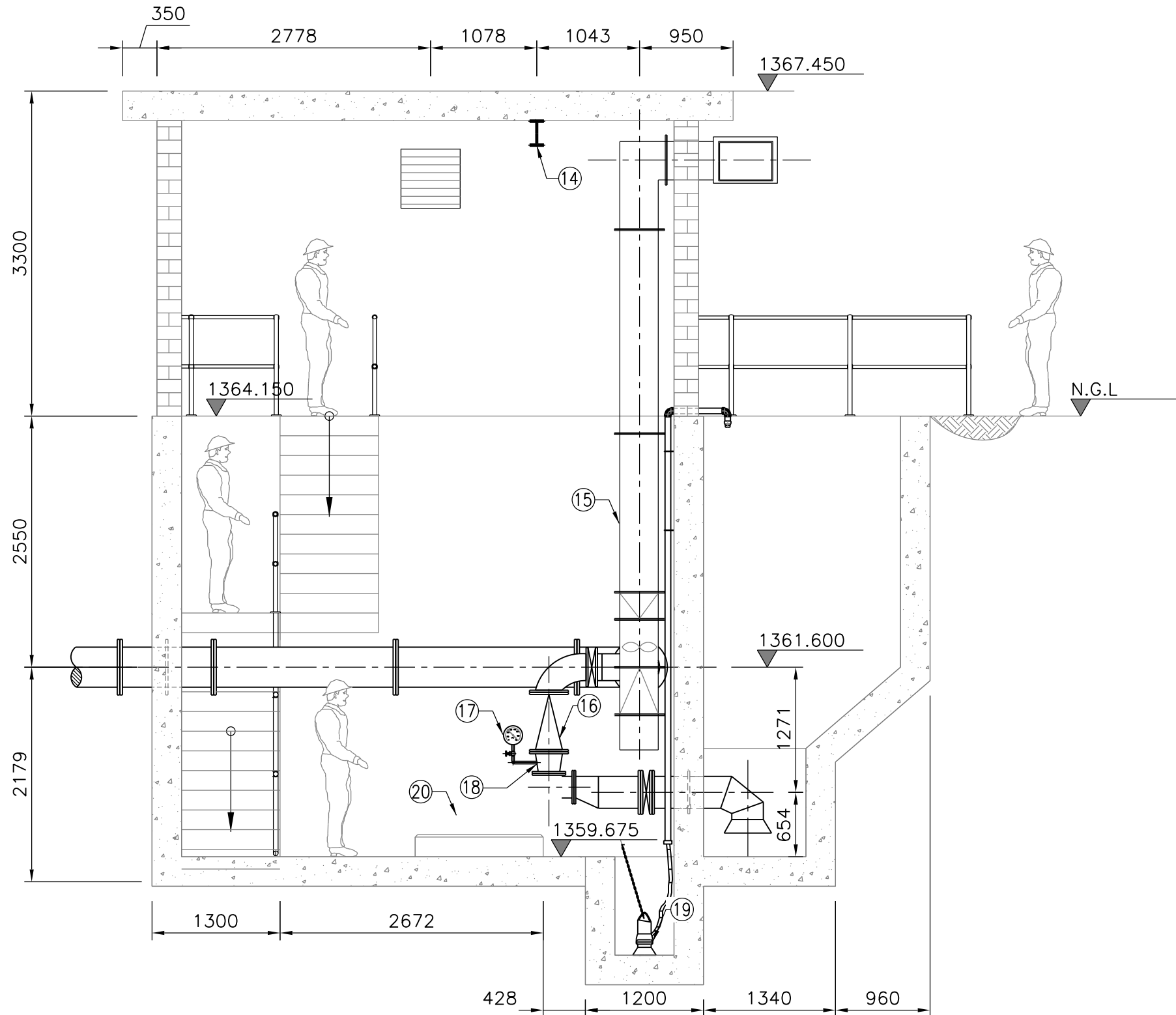
- PUMP SUCTION CENTERS WILL BE DEFINED WITH REFERENCE TO THE SELECTED PUMP DIMENSION. ONLY THE PIPE CENTERS ARE FIXED.
- REFER TO DATASHEET M04 FOR ADDITIONAL PUMP DETAILS
- ONLY PIPEWORK EQUIPMENT AND PUMP ARE TO BE REPLACED. THE PIPES, SUPPORT STRUCTURES AND PIPE FITTINGS TO BE REPLACED AS PER THE MODIFICATION DONE TO SUITE THE EQUIPMENT OR AS IDENTIFIED AND INSTRUCTED BY THE EMPLOYER'S AGENT DURING CONSTRUCTION.
- ALL FLANGE DRILLING SHALL BE IN ACCORDANCE TO SANS 1123 – TABLE 1000/3. ALL FLANGES, FLANGE ADAPTORS AND CORRESPONDING FITTINGS TO SUIT FLANGES AND TO BE FULL FACED.
- AN APPROVED INSULATION MATERIAL SHALL BE USED BETWEEN THE CONTACT FACES OF DISSIMILAR METALS. GASKETS SHALL BE A MINIMUM OF 3MM THICK FULL FACE WITH A DRILLING TO SANS 1123–TABLE 1000/3. CORROSION PROTECTION AND COLOR CODE SHALL BE IN ACCORDANCE WITH THE JOHANNESBURG WATER STANDARD SPECIFICATION G01 AND G02.
- THE MINIMUM DEGREE OF MOTOR PROTECTION SHALL BE IP 55 TO SANS 1222, OR ALTERNATIVELY SPECIFIED. MOTORS SHALL PREFERABLY BE OF THE TOTALLY ENCLOSED FAN–COOLED (TEFC) TYPE.
- ALL UNDER WATER FASTENERS SHALL BE 316 SS AND MATING FLANGES SHALL BE SEALED AGAINST THE INGRESS OF ANY CREVICE CORROSION BY MEANS OF A SEALANT SUITABLE FOR UNDERWATER CONDITIONS.
- THE CONTRACTOR SHALL INCLUDE FOR ALL NECESSARY CIVIL PREPARATION WORK REQUIRED ON THE EXISTING PUMP PLINTHS MODIFICATION TO SUITE THE PUMPSET, DRILLING, CORE DRILLING FOR FOUNDATION BOLT HOLES AND SPINDLES AND GROUTING OF BOLTS AND BASE PLATES INTO POSITION.
- CENTRIFUGAL PUMPS SHALL HAVE STABLE NON-OVERLOADING CHARACTERISTICS AND THE SHAFT SPEED SHALL NOT EXCEED 1500 RPM.
- THE PUMP SHALL USE NON-CLOGGING IMPELLERS. PUMPS SHALL BE DESIGNED AS TO REMOVE THE IMPELLER COVER WITHOUT MOVING THE PUMP, PIPE WORK OR MOTOR.
- THE PUMPS SHALL BE OF THE HIGHEST QUALITY AND SHALL BE SUITABLE FOR CONTINUOUS OPERATION OVER LONG PERIODS WITH A MINIMUM AMOUNT OF MAINTENANCE AT HIGH–SUSTAINED EFFICIENCY
- VALVES WHICH ENCOUNTER RAW WASTEWATER, TREATED WASTEWATER AND SLUDGE SHALL BE MANUFACTURED FROM CORROSIVE RESISTANT MATERIAL.
- THE VALVE BODY SHALL BE CAST IRON WITH SOFT RUBBER LINING. SPINDLE AND BLADE ARE TO BE MANUFACTURED FROM STAINLESS STEEL. VALVE SEALS ARE TO BE RE–PACKABLE AND REVERSIBLE MADE FROM NITRIDE RUBBER WITH PTFE SCRAPERS.



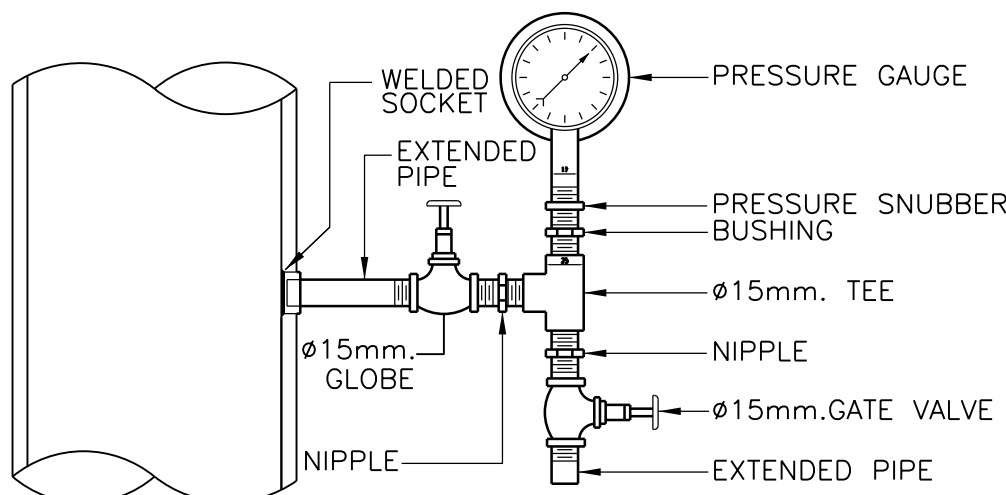
PUMPS SUCTION PIPE PLAN VIEW
SCALE 1:50



PUMPS DELIVERY PIPE PLAN VIEW
SCALE 1:50



ELEVATION VIEW
SCALE 1:50



PRESSURE GAUGE TYPICAL DETAIL
SCALE 1:5

LIQUOR PUMP STATION EQUIPMENT AND PIPEWORK SCHEDULE FOR TENDER PURPOSE						
ITEM NO.	SPEC NO.	DIA. (MM)	QTY	SIZE (MM)	DESCRIPTION	
1	SANS 719	300X200	3	–	MEDIUM PRESSURE MILD STEEL EPOXY COATED ECCENTRIC REDUCER FLANGED ON ONE END	
2	SANS 719	300	3	426 F/F	MEDIUM PRESSURE MILD STEEL EPOXY COATED PIPE FLANGED ON ONE SIDES	
3	M20	300	3	PN 10	KNIFE GATE VALVES FOR ISOLATION	
4	SANS 719	300	3	610 C/F	MILD STEEL EPOXY COATED 90° MEDIUM RADIUS BEND WITH PLAIN ENDS AND A SUCTION BELLMOUTH	
5	SANS 719	250	4	254 C/F	MILD STEEL EPOXY COATED 90° SHORT RADIUS BEND, FLANGED ON BOTH SIDES, STD	
6	M20	250	3	PN 10	KNIFE GATE VALVES FOR ISOLATION	
7	SANS 719	250	1	381 C/F	MILD STEEL EPOXY COATED 90° MEDIUM RADIUS BEND, FLANGED ON BOTH SIDES, STD	
8	SANS 719	400X250	1	355.6F/F	MEDIUM PRESSURE MILD STEEL EPOXY COATED ECCENTRIC REDUCER FLANGED ON ONE END	
9	SANS 719	400	1	–	MEDIUM PRESSURE MILD STEEL EPOXY COATED SPECIAL TEE PIPE FLANGED ALL SIDES PIPE AS PER DETAIL ON DRAWING	
10	SANS 719	400	1	–	MEDIUM PRESSURE MILD STEEL EPOXY COATED SPECIAL TEE PIPE FLANGED ALL SIDES PIPE AS PER DETAIL ON DRAWING	
11	SANS 719	400	1	680 C/F	MILD STEEL EPOXY COATED 90° MEDIUM RADIUS BEND, FLANGED ON BOTH SIDES, STD	
12	SANS 719	250	1	1840 F/F	MEDIUM PRESSURE MILD STEEL EPOXY COATED PIPE FLANGED ON ONE SIDE	
13	SANS 719	250	1	1846 F/F	MEDIUM PRESSURE MILD STEEL EPOXY COATED PIPE FLANGED ON BOTH SIDES	
14			1	254X146X37	TAPERED FLANGED SECTION FOR 1000KG CRAWL BEAM	
15	QSH Act No. 85	200X200 DUCT	1	12 AIR CHANGES PER HOUR	CONTINUOUS AIR EXTRACTION FAN WITH A MAXIMUM NOISE PRODUCTION OF 55DB INCLUDING THE ASSOCIATED DUCTWORK AND ANCILLARIES	
16	M20	250	3	PN 10	NON-SLAMMING NON-RETURN VALVES	
17	M18	25	6	0–1000KPA	GLYCERINE FILLED PRESSURE GAUGES WITH TALE TAIL AND AS PER DETAIL SHOWN	
18	SANS 719	250X150	3	–	MEDIUM PRESSURE MILD STEEL EPOXY COATED CONCENTRIC REDUCER FLANGED ON BOTH SIDES	
19	SANS 62	50	1	–	HOT DIPPED GALVANIZED MILD STEEL PIPE (INCLUSIVE OF FITTINGS) FOR SUMP DRAIN WITH A FLEXIBLE HOSE AT FROM THE PUMP AS INDICATED IN DRAWING WITH A SUBMERSIBLE SUMP PUMP RATED AT 2.5L/sec	
20	M18	–	3	340 M3/HR @ 25M	SUCTION END–CENTRIFUGAL PUMP	

DEPARTMENT	APPROVED	DESIGNATION	DATE

CONSULTING ENGINEERS

HATCH

SURVEYED	–
DESIGNED	M. MAHLANGU
DRAWN	M. MAHLANGU
CHECKED	J. PRINSLOO
SERVICES CHECKED	
GEOTECHNICAL INVESTIGATION	
SERVITUDES	
APPROVED	
Pr. Eng. No.	
DATE	

JOHANNESBURG WATER (PTY) LTD



17 HARRISON STREET
MARSHALLTOWN
2107

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FAX: (011) 688-1529

CITY OF JOHANNESBURG

NORTHERN WASTEWATER TREATMET WORK
UNIT 4 LIQUOR TREATMENT PLANT

GENERAL ARRANGEMENT OF THE BELT–PRESS
LIQUOR PUMP STATION

DESIGN
MANAGER

J. PRINSLOO

DATE 17/11/2020

SCALE

AS SHOWN

AMENDMENTS

	ISSUED FOR TENDER	J. PRINSLOO	17/11/2020
	ISSUED FOR RETENDER	J. PRINSLOO	19.07.21

APPROVED

DATE

DRAWING No.

JW NUMBER
JW13599–ME–011
CONSULTANT'S NUMBER
H349523–ME–011
FILE No
BWW1402