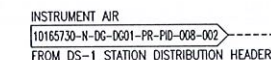


INSULATION : NO CO2
TRIM : PP01-361-V001-TX0001-B03E7



1. ALL SP ITEM, TIE-IN POINT & INSTRUMENT TAG NUMBERS, EXCEPT LINE NUMBERS ON THIS DRAWING SHALL BE PREFIXED BY PROJECT BREAK DOWN ID CODE (PP01) AND SYSTEM NO. 361, UNLESS SPECIFIED OTHERWISE.
2. SCRAPER LAUNCHER TO BE SUITABLE FOR INTELLIGENT SCRAPING.
3. SCRAPER LAUNCHER TO HAVE QUICK OPENING END CLOSURE.
4. SCRAPER SIGNALER TO BE SUITABLE FOR THE VARIOUS TYPES OF SCRAPERS.
5. NON INTRUSIVE SIGNALERS TO BE USED.
6. LOCATE THIS VALVE AS CLOSE TO END CLOSURE.
7. FOR PIPELINE LEAK DETECTION SYSTEM REFER TO SPECIFICATION FOR LEAK DETECTION SYSTEM DOC. NO. 100478CP-N-PG-PP01-IC-SPC-0015.
8. PG-0001 SHALL BE OF FULL RANGE (0-45 barg).
9. DELETED.
10. DISTANCE FROM ISOLATION VALVE TO SCRAPER SIGNALER SHALL BE AT A MINIMUM DISTANCE OF THE MAXIMUM INTELLIGENT SCRAPER LENGTH.
11. DELETED.
12. PRESSURE INDICATOR TO BE VISIBLE FROM SCRAPER LAUNCHER DOOR. PRESSURE RANGE TO BE LOW (ATMOSPHERIC) WITH OVER RANGE PROTECTION.
13. PORTABLE NITROGEN CYLINGER WITH PRESSURE REDUCTION REGULATOR SHALL BE USED FOR PURGING.
14. NO FLOW SIGNAL FROM 361-FI-0001 SHALL STOP CORROSION INHIBITOR INJECTION PUMPS WITHIN CORROSION INHIBITOR INJECTION PACKAGE, PP01-520-Z101.
15. 3LPP SHALL BE TERMINATED 300 mm BELOW GROUND LEVEL.
16. ANTI-CORROSION COATING SHALL BE AS PER SPECIFICATION FOR COATING OF BENDS AND FITTINGS DOC. NO. 100478CP-N-PG-PP01-ML-SPC-0018 AND EXTENDED UP TO THE ISOLATION JOINT.
17. THE VALVE TRIM SHALL HAVE PREN VALUE OF 25 MINIMUM.
18. DURING NORMAL OPERATIONAL PIGGING OF DS-1 PIPELINE, PIG VELOCITY TO BE MAINTAINED AT 5 m/sec. FI-0001 SHOULD BE SET USING PV-1001/2001/3001 TO GET THE REQUIRED PIG VELOCITY. DURING PIG-ANALYSIS AFTER PIPELINE COOLDOWN PIG VELOCITY TO BE MAINTAINED 3 m/sec.
19. SCRAPER ISOLATION VALVES TO HAVE KEY INTERLOCK SYSTEM TO ENSURE VALVES ARE CORRECTLY POSITIONED SUCH THAT DOOR CAN NOT BE OPENED UNLESS SECURELY ISOLATED FROM GAS SYSTEM AND VESSEL DEPRESSURIZED.
20. DELETED.
21. VALVE TO BE PROVIDED WITH INCHING FACILITY.
22. COSASCO TYPE FITTING TO BE CONSIDERED FOR CORROSION MONITORING.
23. DURING PIGGING, CORROSION INHIBITOR INJECTION TO BE STOPPED.
24. HYBRID CONTROLLER TO TRIP ESD VALVE.
25. VENTS TO BE LOCATED AT HIGH POINT AND DRAINS AT LOW POINT.
26. FIBER OPTIC BASED LEAK DETECTION SYSTEM IS PROVIDED. REFER LEAK DETECTION PHILOSOPHY 100478CEP-N-PG-PP01-IC-PHL-0002 FOR DETAILS.
27. HAND SWITCH ON HARD WIRED CONSOLE IS PROVIDED IN EPP CONTROL ROOM FOR OPERATOR TO ACTIVATE ESD-1 SHUTDOWN ON CONFIRMED LEAK DETECTION.
28. PZT-0011 WILL CLOSE EZV-0001 INCASE OF HIGH HIGH AND LOW LOW PRESSURE IN THE PIPELINE.
29. MONOLITHIC ISOLATION JOINT.
30. STOP ARRANGEMENT TO BE PROVIDED TO AVOID FULL CLOSURE.
31. CORROSION MONITORING FITTINGS SHALL BE LOCATED AT BOTTOM OF PIPE AT LEAST 10 PIPE DIAMETER DOWN STREAM OF BENDS; VALVES WHICH CAN CREATE TURBULENCE.
32. FOR SEQUENCE OF OPERATION REFER SPECIFICATION FOR KEY MECHANICAL INTERLOCK DOCUMENT NO. 100478CP-N-PG-PP01-PL-SPC-0023.
33. FUTURE CONNECTION. TO BE LOCATED NEAR THE PROPOSED NEW KOD IN DS-1.
34. ESD SIGNAL FROM DS-1 CRASH VALVES CONTROL SYSTEM (CVCS) SHALL LEAD TO SHUTDOWN OF EPP GAS PIPELINE (361-1-008).
35. A DEDICATED MANUAL SHUTDOWN PUSH BUTTON TO ISOLATE EPP SYSTEM TO BE PROVIDED (361-1-009).

1. FOR GENERAL NOTES, LEGENDS AND SYMBOLS REFER DRAWING NO.
100478CP-N-PG-PP01-PR-PID-0001 SHEETS 001 TO 017.
2. FOR ESD CAUSE & EFFECT CHART FOR PROCESS AREA REFER DOCUMENT NO.
100478CP-N-PG-PP01-PR-DCE-0001.

1. LA TIE-IN LOCATION/SIZE.

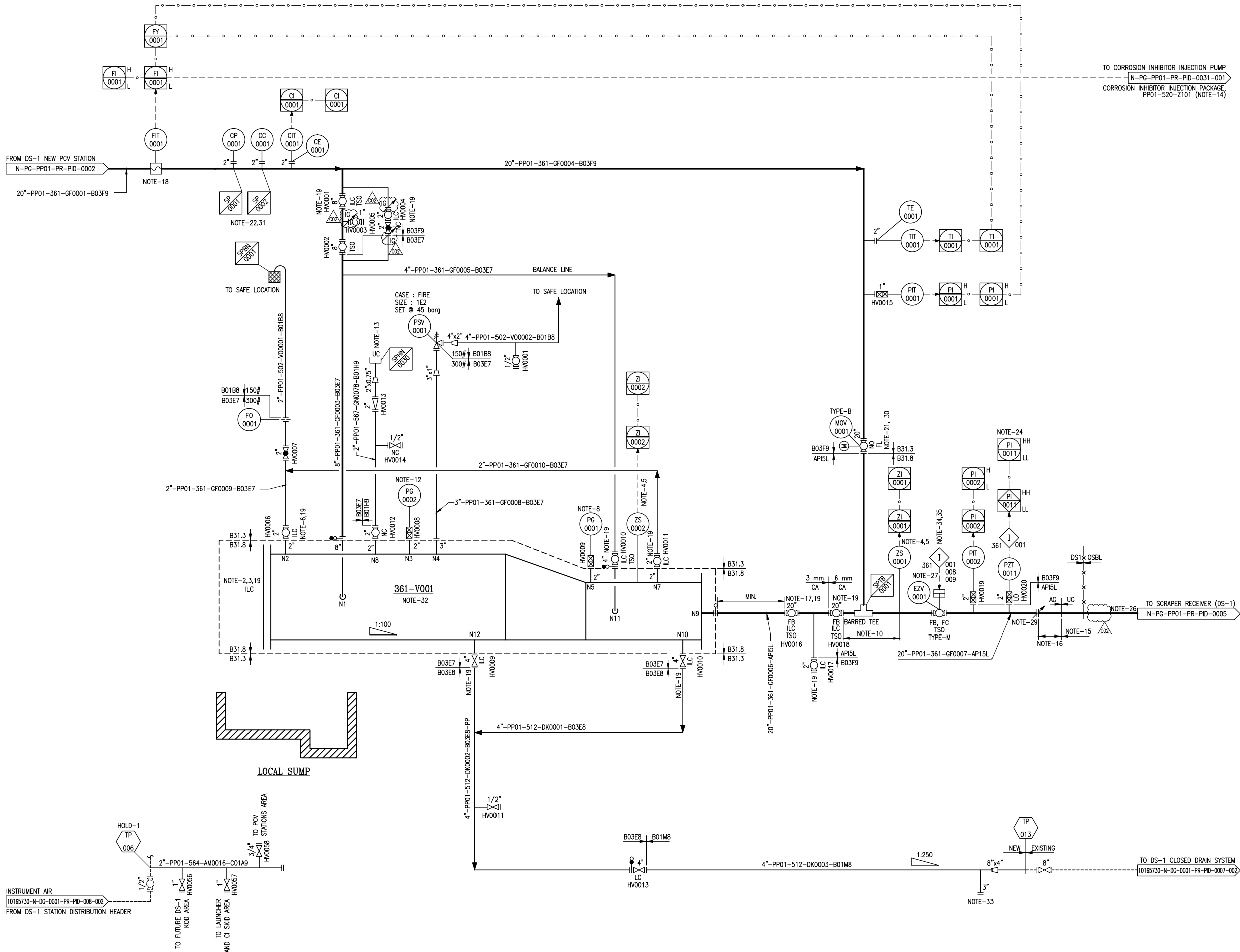
[illegible][illegible]

CAD FILENAME: 100478CP-N-PC-PP01-PR-PID-0004-001-C02.DWG

CAD FILENAME: 100478CP-N-PG-PP01-FR-PID-0004-001-C02.DWG

NOTICE: THIS DRAWING AND THE INFORMATION IT CONTAINS IS THE SOLE PROPERTY OF RUMAILA OPERATING ORGANIZATION. IT SHALL NOT BE REPRODUCED OR LENT WITHOUT THE AGREEMENT OF THE OWNER.

PP01-361-V001
SCRAPER LAUNCHER
SIZE : MAJOR BARREL 610 mm DIA / MINOR BARREL 508 mm DIA
DESIGN CONDITION : 45 barg @ -29~100°C
OPERATING CONDITION : 10~11 barg @ 20~80°C
MOC : CARBON STEEL (NACE) + 3 mm CA
INSULATION : (NO)
TRIM : PP01-361-V001-TX0001-B03E7



NOTES:

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9. DELETED.
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11. DELETED.
12. PRESSURE INDICATOR TO BE VISIBLE FROM SCRAPER LAUNCHER DOOR. PRESSURE RANGE TO BE LOW (ATMOSPHERIC) WITH OVER RANGE PROTECTION.
13. PORTABLE NITROGEN CYLINDER WITH PRESSURE REDUCTION REGULATOR SHALL BE USED FOR PURGING.
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23. DURING PIGGING, CORROSION INHIBITOR INJECTION TO BE STOPPED.
24. HYBRID CONTROLLER TO TRIP ESD VALVE.
25. VENTS TO BE LOCATED AT HIGH POINT AND DRAINS AT LOW POINT.
26. FIBER OPTIC BASED LEAK DETECTION SYSTEM IS PROVIDED. REFER LEAK DETECTION PHILOSOPHY 100478CP-N-PG-PP01-IC-PHL-0002 FOR DETAILS.
27. HAND SWITCH ON HARD WIRED CONSOLE IS PROVIDED IN EPP CONTROL ROOM FOR OPERATOR TO ACTIVATE ESD-1 SHUTDOWN ON CONFIRMED LEAK DETECTION
28. PZT-0011 WILL CLOSE EZY-0001 INCASE OF HIGH HIGH AND LOW LOW PRESSURE IN THE PIPELINE.
29. MONOLITHIC ISOLATION JOINT.
30. STOP ARRANGEMENT TO BE PROVIDED TO AVOID FULL CLOSURE.
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GENERAL NOTES:

1. FOR GENERAL NOTES, LEGENDS AND SYMBOLS REFER DRAWING NO. 100478CP-N-PG-PP01-PR-PID-0001 SHEETS 001 TO 017.
2. FOR ESD CAUSE & EFFECT CHART FOR PROCESS AREA REFER DOCUMENT NO. 100478CP-N-PG-PP01-PR-DCE-0001.

HOLDS:

1. IA TIE-IN LOCATION/SIZE.

C02	01.09.16	ISSUED FOR CONSTRUCTION	DX	VU	AB	SQ
C01	01.06.16	ISSUED FOR CONSTRUCTION	DX	VU	AB	SQ
D01	29.02.16	ISSUED FOR USE (DD)	DX	DM/VU	AB	SQ
H01	07.01.16	ISSUED FOR HAZOP (DD)	DX	DM/VU	AB	SQ
G01	06.10.15	ISSUED FOR REVIEW (DD)	DX	DM/VU	TT	SQ
B02	06.08.15	APPROVED FOR COMPLETION OF FEED	DX	HM/SI	TT	SQ
B01	26.03.15	ISSUED FOR FEED HAZOP	DX	SI/RS	TT	SQ
A01	19.02.15	ISSUED FOR COMPANY REVIEW	DX	HM/RS	TT	JF
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D	

EARLY POWER PLANT
RUMAILA OIL FIELD
CONTRACT NO. 100478

中国石油工程建设公司
CHINA PETROLEUM ENGINEERING & CONSTRUCTION CORP.

CH2M HILL

DRAWING TITLE:
PIPING AND INSTRUMENTATION DIAGRAM
SCRAPER LAUNCHER (DS-1)

PROJECT NO.	100478CP	SCALE:	NONE	DWG SIZE:	A1
DRAWING NUMBER:				SHT. NO.:	REV.
100478CP-N-PG-PP01-PR-PID-0004-001				01/01	C02