

FIWP PIPING

Project Number:	2111		
FIWP number & revision number:	FIWP 2111- 121		
All related CWP and revision number:	CWP-2111-01		
Area/System/SubSystem/Discipline:	Area 2111 - Piping		
Work will be performed : Greenfield			
Prepared by:	John Planner	Date:	1 Aril 06
Revised by:	John Planner	Date:	15 April 06
Issued by:	Joe, Piping Superintendent	Date:	1 May 06
Released by:	Boss B. Shied, Area Superintendent	Date:	7 May 06
Assigned to:	Dale Gig, Foreman	Date:	May 15 06
Reason to Recall:		Date:	
Completed by:	Willy Dump, Piping Field Eng.	Date:	1 June 06

Scope:

Install, fit and weld 24" carbon steel large bore piping from pump P-5304 discharge flange to Vessel C2112 inlet flange. The tower is 60' tall and the inlet flange is located at the top of the tower with a service platform 2' below. The pump is located 50' SE to the tower, the piping is elevated to 12 feet above grade and running west and north to south side of the tower and up to the nozzle.

The piping is fabricated into 3 spools A, B & C and requires 2 field welds after installation. The piping has two free standing pipe supports at grade and 2 located on the side of the tower.

Estimate spool length spool "A" is 50' long, spool "B" is 30' and spool "C" is 40' plus.

See DWG# _____ & ISO _____.

Deliverable:

-Pipe supports materials, pipe spools, gaskets and hardware material for work commencing on June 10-06.

-Required a 80 ton crane for spool erection and a 30 ton for tailing and pipe support installation.

-Scaffold must be in place prior to work commencing.

Activities:**Sequence of spools installation from tower to pump.**

- Surveyors to verify centerline and elevation on pipe support foundations.
- Erect scaffolds at pipe support and field joints for access. Leave temporary access for spool installation.
- Piping crew to verify piping materials, gasket and hardware, spool dimensions,

check for shipping damage, and prepare for installation.

- Transport material and spools from lay down yard to installation site.
- Install pipe supports, once installed surveyor to verify elevation
- Setup 80t crane east of tower and lay spool north of crane running east/west with tower connection on west side. And setup tailing 30t crane on tail end of spool.
- Prepare rigging material, verify sling sizes and length, check for damage.
- Lift and install spool "A" from tower inlet flange down using an 80 ton for the main lift and 30t for tailing. Secure spool with two tower supports.
- Install spool "B" on pipe support and temporary fit and secure to spool "A".
- Install spool "C" temporary bolt to pump discharge flange and secure to pipe support.
- Review attached welding procedure and verify welding rods.
- Align pipe flange to pump discharge, fit and weld two joints with QC inspection and approval of welding.
- NDE joints.
- Bolt up crew to check bolt tension on flanges and pipe support.
- Dismantle scaffolds.
- Daily progress report.

Next step hydro piping and EHT and insulation.

Resources:

Equipment:

80T mobile crane for spool installation and a 30t for tailing and install pipe supports.
 One Rectifier welding machine; rod oven.
 One set of Surveyor equipment.

Tools:

Rigging wire slings and shackles,
 Oxy/Acct. cutting outfit, welding lead; hand grinders; rasp file; 1 7/8" combination wrenches, 1 7/8" torque wrench and pipe fitter hand tools.

Materials:

Pipe support materials and 3 spools at lay down yard.
 Hardware and gaskets are bagged and tagged at warehouse.
 Welding rods are in tool crib in welding rod's oven.
 Scaffolding material.

Labour:

1 – Scaffold F/M 3 Scaffolders and 1 labour.
 1 – Piping foreman; 3 p/f riggers, 1 fitter, 1B-pressure welders and 1 apprentice.

Work Instructions:

All crane operators must have project certification. Welders must be tested on site.
Setup red flagging and clear rigging area; complete SPA before work proceed.
Setup welding hoarding or screens and sparks containment and covers up equipment below.
Maintain a fire watch when welding and cutting.
Coordinate with other craft and Forman working around the same area.

Safety Equipment:

Barricade tape; fire extinguishers; safety harness; respirators and smoke removal.

Drawings:

Piping Isometric - 53-LP-2110-CS-111 sheet 1 Rev 3
- 53-LP-2110-CS-111 sheet 2 Rev 3
Spool Drawing- - 53-LP -0211-CS- A
- 53-LP -0211-CS- B
- 53-LP -0211-CS- C

Vendor Info.

Piping fabricator to provide piping cut sheets & inform of any RFIs, changes or materials are outstanding.

Special Conditions:

We will be working at heights for a lot of this FIWP so take time in the morning and after lunch to reinforce 'working at heights' safety standard. Exercise and stretch in the morning before climbing the tower.
Apprentice must be teamed with a journeyman.

Quality Control:

All bolts are to be torque to project spec 2111-ST-S2 rev 1. Spec is attached.
Welding inspector to check on welder periodically and verify correct welding rods.
Notify Willy Engineer for a spot check on bolt tensioning.

Interdependencies:

This work package is dependent on the availability an 80T cranes which are currently being used by Ironworker installing structural steel. One week prior to start of work confirm the availability of the crane.

Risk Planning:

Do a hazard analysis before rigging spool to connect to top of tower.
Conduct pre lift meeting with crew directly prior to lift occurring.

Reverse Punch List (Error Proofing):

We have recently experienced some quality issues wrong gasket material was deliver to site for installation at pump's discharge flange.
Have experienced fitter verify the gasket material again drawing's material list before

installation and inform Forman Dale if any discrepancies.

Lessons Learned:

Warehouse personnel must verify all material before deliver to site for installation.
