Joint Integrity Program Management Framework

ENGEN

Planning & Preparation

1. Schedule of activities
2. Critical Joint and Critical Untouched (Unbroken) Joint Criteria
3. Joints requiring HTW and HBT
4. Rectification plan for joints with history of leaks
5. Torque value tables
6. OPU manpower requirements for Execution
7. Contractor's manpower requirements and number of teams
8. HTW and HBT Contractor's manpower and equipment requirement
9. Work Flow, Inspection Hold Points and JICS – as per this procedure
10. Training Program
11. Contractor Competency Assessment Program
12. List of Deliverable at each stage of Planning, Pre Execution, Execution and Post Execution – as per this procedure

Pre-Execution

26. Dry Run and tagging activities
27. Inspection activities for tools and certificates
28. Inspection of specific material size & type of gaskets i.e for exchangers, vessel
29. Verify BFJA material tagging & bagging
30. Full mobilization of JIT
31. Conduct BFJI Briefing
32. Distribute torque value table to related parties
33. Verify readiness of all BFJI documents for execution i.e. Procedure, JICS, etc
34. Compile documents (JICS, WCS, etc) for PASR – SD

Execution

35. Monitor, track, verify joints during break flange, blinding, deblinding & flange reinstatement activities.
36. Record and resolve BFJA findings.
37. Check torque value for all CUJ
38. Carry out QA/QC random surveillance audit and CCA Audit (priority on critical BFJA)
39. Participate & provide update during QA/QC daily progress meeting
40. Compile reports for record and PASR –SU
41. Monitor and rectify any leaks during Startup
42. Rectify and record any leaks from Untouched Joints
43. Remove tags after Plant Stabilized

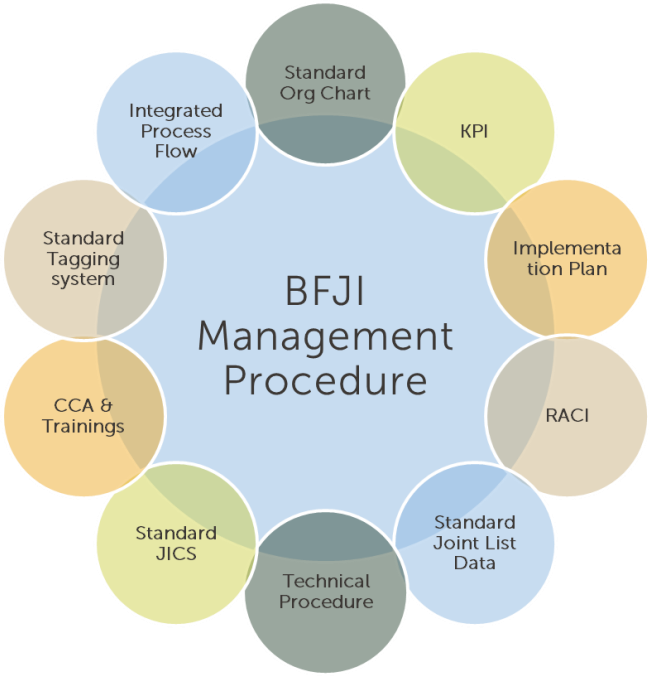
Post Execution

43. Compile lessons learnt
44. Close out report (summary of joints, KPI, leaks, NCR, no. of total audit, etc) – *to be incorporated within Quality Close Out*
45. Identify best practices
46. Share information group wide via COP, axis, technical forum, etc.

Bolted Flange Joint Integrity (BFJI) Management Procedure

Procedure highlights **10 Elements** to be complied with.

Document Structure

BFJI Management Procedure

- APP 1: BFJI Management Process Flow
- APP 2: Standard Organization Chart
- APP 3: RACI Chart
- APP 4: BFJI Tagging Implementation
- APP 5: Joint Integrity Control Sheet
- APP 6: Sample of Joint List
- APP 7: Pressure Boundary Bolted Flange Joint Assembly Technical Procedure
  - APP A to APP P: As per ASME-PCC-1 2013
  - APP Q: Torque Value Table
  - APP R: Oxygen & Ethylene Oxide Services Procedure
- Contractor Competency Assessment Questionnaires