Bolt torque record (flanged joint)

Yellow cells are for you to fill in. Free template from Deskely · deskely.com/resources/bolt-torque-record

Joint ID	Line / tag	Test pack
Flange size and rating	**Flange face type**	**Gasket type and material**
Stud bolt material and grade	**Bolt size and quantity**	**Lubricant**
Tightening method	**Tool type and serial number**	**Tool calibration due**
Technician	**Competency (e.g. ECITB MJI or equivalent)**	**Date**

1. PRE-ASSEMBLY CHECKS

No.	Check	Status	Remarks
1	Flange faces clean and free of damage (no radial scores across the sealing face)		
2	Gasket correct to the line class, new and undamaged		
3	Bolts correct material and length, nuts free running, threads lubricated on the threads and nut face		
4	Flange alignment and parallelism within the tolerance of the procedure		

2. TARGET TORQUE

Nut factor K		From the lubricant data or the procedure (often 0.12 to 0.20)
Nominal bolt diameter D (mm)		e.g. 22.2 for 7/8"
Target bolt load F (kN)		From the joint design (bolt stress × tensile stress area)
Calculated torque T (Nm)		T = K × D × F (Nm = K × mm × kN)
Target torque used (Nm)		From the joint design or procedure; this value drives the passes below

Target values must come from the joint design or the bolting procedure. The calculator is a check only.

3. TIGHTENING PASSES (ASME PCC-1 LEGACY CROSS PATTERN)

Pass	Pattern	% of target	Target (Nm)	Torque applied (Nm)	Done by	Date
1	Cross pattern	30%				
2	Cross pattern	60%				
3	Cross pattern	100%				
4	Circular, until no further nut rotation	100%				

4. FLANGE GAP (MEASURED AROUND THE FLANGE AFTER THE FINAL PASS)

Point	Position (clock)	Gap (mm)	Point	Position (clock)	Gap (mm)	Remarks
1	12:00		5	6:00		
2	1:30		6	7:30		
3	3:00		7	9:00		
4	4:30		8	10:30		

Maximum gap (mm)		
Minimum gap (mm)		
Difference (mm)		Maximum minus minimum
Allowed difference (mm)		From the procedure
Result		Calculated

5. FINAL

No.	Check	Status	Remarks
1	Joint tag fitted (joint ID, date, technician)		
2	Final pass recorded; all nuts confirmed at target		
3	Thread engagement: at least full nut engagement on every bolt		

Sign-off	Name	Signature	Date
Technician			
QC verification			

Flanged joint register

One line per joint. Status follows the joint through its life: broken for the test, made up again, then tested.

Project	System / subsystem	Register owner

Status

Joints: 1 Broken: 0 Made up: 1 Tested: 0 QC verified: 0

Joint ID	Line / tag	Test pack	Size	Rating	Gasket	Bolt size	Target (Nm)	Date	Technician	Status	QC verified	Remarks
J-1001-01	*6"-P-1001-A1A*	*TP-20-001*	*6"*	*300#*	*SW 6" 300# 316/graphite*	*3/4" x 8*	*285*			*Made up*	*No*	*Example*