



AnjurEkar



JOINT INTEGRITY SOLUTIONS



Leaks are a threat to profits, safety, environment and the ultimately human. Problems resulting from leaks in flanges can range from local in severity to plant-wide catastrophe. Although the range of negative results can vary widely; leaks have one thing in common: ***all leaks are preventable.***

Leaks don't happen by accident; they happen by design. Rather than being symptoms of product failure, leaks are generally evidence of failure in process control.



Incidents: At Local Malaysia's Plant



Picture 1. It was reported that the incident saw 10-metre-high flames shoot up.



"Thus, when you fix the process control, you fix the leaks before they happen."

Joint Integrity Solutions (JIS) by Anjur Ekar Sdn.Bhd is considered as the key elements to achieving prime objectives of flange joint integrity which is to assure leak-free integrity of the bolted flange joint. An integrated approach has been adopted to ensure success of the process of joint integrity.

This process shall begin with:

- i) understanding of the operating environment
- ii) continues with design
- iii) selection of the flange components
- iv) setting of assembly specifications
- v) establishment of best procedures
- vi) appointment of competent personnel
- vii) quality assurance traceability through complete documentation (using sophisticated and systematic software for database)
- viii) finishes with meeting the goal of leak prevention.

"The goal of leak prevention is achievable and starts with a mind-set of doing things right the first time."

Joint Integrity Solutions (JIS) by Anjur Ekar Sdn Bhd were offered to the industry as the most comprehensive and sophisticated service to cater all service and work related to bolted joint integrity and asset reliability. JIS is in accordance and compliance with most recent requirements by **ASME PCC-1** and '**Guidelines for The Management of The Integrity of Bolted Joint For Pressurised System**' by Energy Institute UK.



"The final, essential creator of the force is the mechanic, and the time of creation is during assembly. So it's very important for us to understand this process".
- John Bickford, "Handbook of Bolts and Bolted Joints"

Our objectives and vision is to provide a safe process system, non-hazardous area, reliable bolted joint connection, ZERO leakage, Environmental friendly and sophisticated works execution throughout all stages. In conjunction to that our service (JIS) shall completely covers all works pertaining to joint integrity. JIS shall starts from the procurement of flanges to the installation till final stage which includes leak testing and final approval prior to hand over. Thus only competent personnel will execute the work, correct material will be used, strictly endorsed and verified procedures will be followed, inspection / witness will be done

undoubtedly by authorised and qualified personnel, lastly but surely to come out with detail standardised report for each dedicated joint. On top of it, the essence which act as the vehicle to merge all related works into this JIS is the bolted joint management software. In presence of this useful software all relevant activities will be recorded and monitored in the most comprehensive manner. The bolted joint management software has a very user friendly interface equipped with brilliant advisory and systematic data storage function in which will efficiently recorded all data or information in a systematic / easily accessible database system.

Apart from that we also provide:

- Welding Habitat (WICH)
- Engineering works (minor-preliminary drawing, drafting)
- Pipeline repair and maintenance (Minor Fabrication, Riser maintenance, Pig Trap (Launcher & Receiver, Barrel Door), Pipeline Strengthening (wrapping), Sectional replacement, line modification, pipeline rerouting and installation of associated piping.
- Vessel / Tank cleaning. Chemical cleaning /decontamination – Schedule waste handling.

References:



Under our packages basically we offer:

Joint Integrity Solutions (JIS)

- Controlled bolting (MTW, HTW, HBT) -Hot bolting
- On-Site Machining - Cold cutting and bavel
- Flange resurface and repair
- Thorough inspection by competent personnel at 3 major stages
 - 01: Preparation - material selection & purchasing,
 - 02: Installation - witness and inspection on site during job execution,
 - 03: Handover - final report and database record
- Flange Management software
- Leak Testing (Hydrostatic, N2, Helium)
- Leak sealing
- Real time condition based monitoring (Live monitoring on critical joint)
- Pipeline related works



Project									
FLANGE INSPECTION & TIGHTENING REPORT									
Data Page No.					Job No.				
Subsystem		SDE			P-R No.		SCF-004-02-01-0001		
Tighten Pack No.					ISO No.				
Module No.					Location		Mount Information		Pack No.
A. Joint Identification									
Flg. No.	A	Joint	D-1	Geno	F-001	Joint Type	ANSI 15.1.5 8 x 12 UNF Topset		
B. Joint Details									
Flange	Rating	Class	800	API Spec 2	IF	Material	ASTM A193		
Gasket	Type	Series	Wound			Material	SMA		
Size	Size	1.315" x 1.6"				Material	ASTM A193 B7		
Grade	Grade	1.5/1.12 A17				Material	ASTM A193 B7		
C. Joint Inspections									
								Accepted	
Inspected pipe threads								<input type="checkbox"/>	
Condition of flange face								<input type="checkbox"/>	
Condition of nut & bolt threads/insulation								<input type="checkbox"/>	
Condition of gasket face ring & type/material								<input type="checkbox"/>	
Insulated direct flow								<input type="checkbox"/>	
Leakage specification/condition applied to nut/gasket/insulation - gasket/nut/insulation								<input type="checkbox"/>	
Alignment/condition tightening								<input type="checkbox"/>	
Control - tightening sequence used								<input type="checkbox"/>	
Control - amount of thread protrusion								<input type="checkbox"/>	
Alignment/condition tightening								<input type="checkbox"/>	
Leakage specification - the joint (pressure/temperature/condition)								<input type="checkbox"/>	
D. Torque									
Tool		THMLC 2			Torque No.		Change No.		
Tool Type		THMLC 1			ISO Pressure		16 MPa		
ISO Torque	244.2 Nm	ISO Torque	220.2 Nm	ISO Torque	194.1 Nm	Check Torque	224.1 Nm		
E. Torques									
Tool		16 MPa No.			Torque No.				
Pressure A		Pressure B							
Don't give pressure information (pressure B)									
A. Signature:									
Inspector		Accepted/Inspected		Signed/No		Inspected/No			
Date		Date		Date		Date			
Signature		Signature		Signature		Signature			
Date		Date		Date		Date			



Project	Project Manager	Project Status	Project Start Date	Project End Date	Project Budget	Project Actual Cost	Project Variance	Project Risk	Project Notes
Project A	John Doe	Completed	2023-01-01	2023-03-31	\$100,000	\$95,000	\$5,000	Low	Project A completed successfully.
Project B	Jane Smith	In Progress	2023-04-01	2023-06-30	\$200,000	\$180,000	\$20,000	Medium	Project B is currently in progress.
Project C	Mike Johnson	On Hold	2023-07-01	2023-09-30	\$150,000	\$100,000	\$50,000	High	Project C is currently on hold.
Project D	Sarah Lee	Planned	2023-10-01	2023-12-31	\$300,000	\$0	\$300,000	Low	Project D is currently planned.









HEADQUARTER

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