

Flexitallic[®]

Training from Flexitallic

BEST PRACTICES



- Video
- Bolt-Up Workshop
- Classes
- Lunch n' Learn Seminar

BEST PRACTICES

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Best Practices Video

The video demonstrates 'Best Practices' installation and bolt-up procedures using our Flexitallic Sustainable Training Unit (FSTU). In the video, the FSTU clearly shows the scatter in preload that can be expected when bolting up a flange. The video is about 40minutes long and consists of 5 modules which can be viewed individually or in sequence:

- 1 Introduction to torque, best practices bolt-up, and relaxation
- 2 Overview of the Flexitallic Sustainable Training Unit (FSTU)
- 3 Bolt-Up / Assembly
 - a. Improper assembly - worst case scenario
 - b. Ideal Assembly - Best Practices; also Radial Buckling of spiral wound gaskets, and ASME inner ring requirement
- 4 Sigma restructured PTFE installation demo
- 5 Flexpro (kammprofile) installation demo

Each module has a series of review questions about important concepts covered in the module.

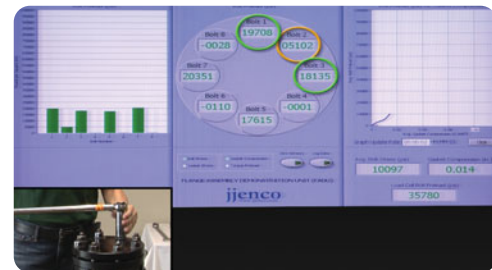
Video

The video can be supplemented by a hands-on bolt-up workshop, or by having a Flexitallic representative present a lunch n'learn seminar at your location.



Best Practices Bolt-Up Workshop

Hands-on training on our FSTU bolt-up rig clearly demonstrates 'Best Practices', as well as the effect of different bolt-up techniques, lubricants, soft vs. hard washers, different gasket types, relaxation, preload scatter, combination vs. torque wrenches, etc. Sessions range from 2 hours to 6 hours and can be tailored to meet your specific requirements. The FSTU bolt-up rig consists of a standard 8 bolt flange; all bolts presented in real time on a digital display showing individual bolt stress, average bolt stress, as well as a bar graph of the scatter and a gasket load-deflection curve.



Best Practices Classes

2 hour class

Initial presentation highlighting overall best practices for installation including

- > **Lubrication**
- > **Even, sufficient gasket load**
- > **Tool accuracy**
- > **PCC-1**

Rig Demonstration including

- > **Legacy /Standard installation procedure**
- > **Demonstrate principles like bolt scatter, cross talk, and relaxation**
- > **Importance of the final pass**
- > **Compare the behavior of different style gaskets. Typically time for only 3 or 4 gaskets**
 - CG vs. CGI (the importance of an inner ring on spirals)
 - Spirals vs. Flexpros
 - Sigma (fully restructured) vs. Virgin PTFE
 - 1/16" vs. 1/8" sheet
- > **Option for craft to attempt achieving desired torque and even load with hand wrench (no torque wrench)**
- > **Customization available**

4 hour class

All the above

Experiment on Load Cell to clearly reinforce the effects of the following:

- > **Importance of lubrication via clean dry studs vs. lubricated**
- > **Importance of nut direction**
- > **Positive effect of through hardened washers**
- > **Compare different types of washers**
- > **Coated studs**
- > **Customization available ex: compare lubricants, effect of rusted fasteners**

Opportunity for craft hands-on operation of rig

Compare additional gaskets specific to customer facility

Compare alternative installation patterns or customer specific / requested procedure if desired

Customization available

6 hour class

All the above

Additional product instruction

All those attending will have the opportunity to operate the rig

Additional time to compare more gaskets

BEST PRACTICES

Training from Flexitallic

Best Practices Lunch n' Learn Seminar

Lunch is on us!

Our lunch 'n learn technical seminar covers various aspects of gasketing. There is no charge for the seminar, and it can be tailored to the needs of the audience, and the time allotted. We would be glad to address any specific issues that you may want to add to the agenda.

Seminar Overview

The gasket is usually the least expensive item in a system, however, if the correct gasket is not ordered or if it is not installed correctly, the gasket can become the most expensive item in terms of downtime, lost productivity, health and safety issues, etc. The intent of Flexitallic seminars is to ensure that designers, engineers, specifiers, users, and purchasers of gaskets are aware of the various styles and materials that are available for specific applications, and to discuss the many factors that affect the performance of a bolted-gasketed joint.

Typical Agenda

- > Gasket Function & Design
- > Spiral Wound Gaskets
- > Radial Buckling / ASME Inner Ring Requirements
- > High Temperature Graphite Oxidation
- > New Products / Problem Solvers
- > How to Specify
- > Storage & Handling
- > 'Best Practices' Installation / Bolt-Up Procedures
- > Troubleshooting
- > Q&A



Contact your Flexitallic Regional Manager
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