

Procedure 3004: Inspection and Maintenance of Food Grade Internal Expansion Plugs

effective 02/08

Note

- Proper inspection and maintenance of Food Grade Internal Expansion Plugs is essential for proper machine performance and satisfactory stem ID (Inside Diameter) surface finish. ID surface finish is critical in maintaining FDA/3A compliance.

Process

- 1. Examine the expansion plug surface for material build-up. The process of internally expanding stainless-steel couplings *will* leave deposits on the expansion plug. These deposits will be in the form of lines that run the length of the plug and a ring around the plug at its largest diameter. If these lines are present, the plug must be cleaned (see step 3). The more 'pulls' or times the expansion plug is used between cleanings, the greater the deposits become. This will result in the expansion machine having to work harder than necessary, poor stem ID surface finish and, ultimately, the plug getting stuck inside the stem before the expansion process is complete. When this occurs, major downtime and expense may be incurred.
- 2. Examine the expansion plug for surface scratches or dents. Minor surface scratches or dents usually do not pose a problem unless they are located in the largest diameter area of the plug. Scratches or dents in the largest diameter area of the plug can result in poor stem ID surface finish. If visible lines are produced on the stem ID as a result of these scratches or dents, the plug must be replaced.
- 3. Clean the expansion plug after each coupling expansion.
 - a. Use 200 to 400 grit wet/dry sandpaper for removing deposits from the expansion plug.
 - b. To remove deposits, wrap the sandpaper around half of the plug with one hand while holding the other half of the plug with the other hand.
 - c. Rotate the sandpaper back and forth several times until the deposits (lines and rings) are removed.
 - d. Repeat this process for the other half of the plug.