|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Obraz zawierający obiekt, lampa  Opis wygenerowany automatycznie |  |  | | |  |  |
|  | | | | | | |
| Main author: | | Pavel Chernenko | Co- author(s): | Bartosz Hyży | | |
| Date: | | 06.12.2023 |  |
| Number of pages: | |  |
|  | |  |
|  | |  |
|  | |  |
|  | |  |

|  |
| --- |
| **Pressure proof test of vent valve** |
| Checklist |
|  |
| The following document provides a checklist of correctly done pressure tests of the oxidizer vent valve. The component is COTS, so the manufacturer provides a specific pressure resistance. However, because of the desire to ascertain the claimed strength and because of the potential for the component to fail as the system is developed, a procedure has been developed to test the pressure strength of the valve. |

Page intentionally left blank

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PROCEDURES CHECKLIST | | | | | | | | |
| **Date (YYYY-MM-DD):** | | | | | **People responsible for the test:** | | | |
| **Time of procedure initiation (HH:MM):** | | | | | **Time of procedure completion (HH:MM):** | | | |
| **Location: 011** | | | | | **Model of the pump used:** | | | |
| **Tested component:**  **TWR.2A.4.01.01.004\_electrovalve** | | | | | **Number:** | | | |
| **Maximum pressure during work: 90 Bar** | | | | | **Work time: 3 hours** | | | |
| **Pressure obtained:** | | **Time elapsed after reaching maximum pressure:** | | | **Pressure after elapsed time:** | **Confirmed safety factor:** | | **Result:** |
| **#** | **Time of activity** | | **Local time** | **Status** | **Activity** | | **Comments** | |
| 1. |  | |  | [ ] | Read the safety rules and the test instruction. Put on protective clothing. | |  | |
| 2. |  | |  | [ ] | Assemble valve according with **TWR2\_vent\_valve\_data\_sheet** including the plastic box with electronics. Make sure to properly assemble sealant. | | Depending on the pump manufacturer's recommendations, use distilled water as a pressure build-up medium. | |
| 3. |  | |  | [ ] | Screw the hydraulic adapters from the inlet side of the valve in such a way that the hydraulic system of the pump can be screwed on. The choice of suitable adapters is arbitrary and depends on the hydraulic interface of the pump. Fill created system with prepared pressure build-up medium. | | **Pay particular attention to the correct choice of valve side. Use flat sealing washers coated with silicone grease where possible. For such connections, use grease also on the threads of the adapters. In the rest of connections, use teflon tape.** | |
| 4. |  | |  | [ ] | Screw the hydraulic interface of the pump to the valve assembly inlet. If its possible, place the valve vertically to facilitate leak detection by observing the presence of leaking medium. | |  | |
| 5. |  | |  | [ ] | Use a pump to build up the desired pressure. | |  | |
| 6. |  | |  | [ ] | Wait the desired time, noting changes in system pressure (see Notes section). | |  | |
| 24. |  | |  | [ ] | Carefully release the pressure using the safety valve on the pump. Disassemble the system. | |  | |
| **Notes:**   |  |  |  | | --- | --- | --- | | No of measurement | Time passed from beginning of test | Current pressure | | 1 |  |  | | 2 |  |  | | 3 |  |  | | 4 |  |  | | 5 |  |  | | 6 |  |  | | | | | | | | | |
| **Legible signatures of people responsible for the test:** | | | | | | | | |