With regards to the safety operation concerns/questions with the Solenoid MPS, after investigations I can mention the following:

**1.** Recommended water supply flows and ΔP by Danfysik are:

   **1.1.**Flow has to be < 180 [l/min] At ΔP (Sup-Ret) = 6 [Bar].

   **1.2.**Flow has to be < 115 [l/min] at ΔP (Sup-Ret) = 3 [Bar].

**2.** Danfysik performed a pressure test for the Solenoid MPS water cooling system at 31 [Bar] for 1 [min], during factory acceptance test protocol on 14/04/2015.

**3.** The max absolute pressure rated by Danfysik = 12 [Bar].

**4.** The table below shows a summary of the values for MPS internal flows recommended and the actual flows as of now:

|  |  |  |  |
| --- | --- | --- | --- |
| **Flow Switch** | **Flow Transmitter Dynamic Range [l/min]** | **Recommended Flows by Danfysik [l/min]** | **Measured Flows [l/min]** |
| FSW1 |  1-80 | 50 | 67 |
| FSW2 |  1-15 | 8.22 | 8.5 |
| FSW3                  |  1-80 | 50 | 71.87 |
| FSW4 |  1-15 | 1.45 | 1.65 |
| FSW5 |  1-15 | 1.45 | 1.55 |
| Total Flow  | -- | 111.12 | 150.57 |

Since actual measured supply flow is **150.57 [l/min]**at**ΔP (Sup-Ret) = 5.17 [Bar]**within the recommended operational values, we can say that the MPS water cooling pressure and flow are safe.

The MPS will not be damaged.