

## TECHNICAL BULLETIN

# CONNECTING TRUNK PRESSURE CONTROL

THE PRESENT TECHNICAL BULLETIN CONTAINS TECHNICAL INFORMATION AIMED TO SUPPORT/IMPROVE DRASS EQUIPMENT CURRENTLY IN OPERATION.

YOU ARE KINDLY REQUESTED TO:

- COMMUNICATE IF THIS DOCUMENT AND THOSE FOLLOWING SHOULD BE SENT TO DIFFERENT E-MAIL ADDRESSES.
- CONTACT DRASS FOR ANY CLARIFICATION NEEDED.
- INVOLVE DRASS FOR IMPLEMENTATION OF ANY SUGGESTED MODIFICATIONS.
- ALWAYS INFORM DRASS OF ANY MODIFICATION TO DRASS EQUIPMENT IN ORDER TO VERIFY SAFETY, ALLOW TRACEABILITY AND LIFE CYCLE SUPPORT.

PLEASE NOTE THAT TECHNICAL BULLETINS WILL BE AVAILABLE FOR PERMANENT CONSULTATION AT [WWW.DRASS.IT](http://WWW.DRASS.IT).

### REASON FOR ISSUE

TO ENABLE CHAMBER CONNECTING TRUNK (SPOOL) PRESSURIZATION / DEPRESSURIZATION TO BE PERFORMED BY EXTERNAL COMMAND.

### DESCRIPTION

THE DRASS ORIGINAL CONFIGURATION PERMITS THE PRESSURIZATION OF THE SPOOL BY MEANS OF THE EQUILIBRIUM VALVE INSTALLED ON THE INTERNAL DOOR OF THE CHAMBER (FOR EXAMPLE V1-1 OR V1-3 ON FIGURE 1). THIS VALVE IS OPENED BY

THE DIVERS AND THE SPOOL IS PRESSURIZED BY THE GAS PRESENT INSIDE THE CHAMBER LOCK.

THE MAXIMUM SPOOL PRESSURE IS ALWAYS THE LOWER OF THE TWO CONNECTED CHAMBER LOCK PRESSURES AS A CHECK VALVE, INSTALLED ON THE LOCK CHAMBER DOOR (V2-1 OR V2-2 ON FIGURE 1), DISCHARGES THE SPOOL OVERPRESSURE INSIDE THE LOCK WITH THE LOWER PRESSURE.

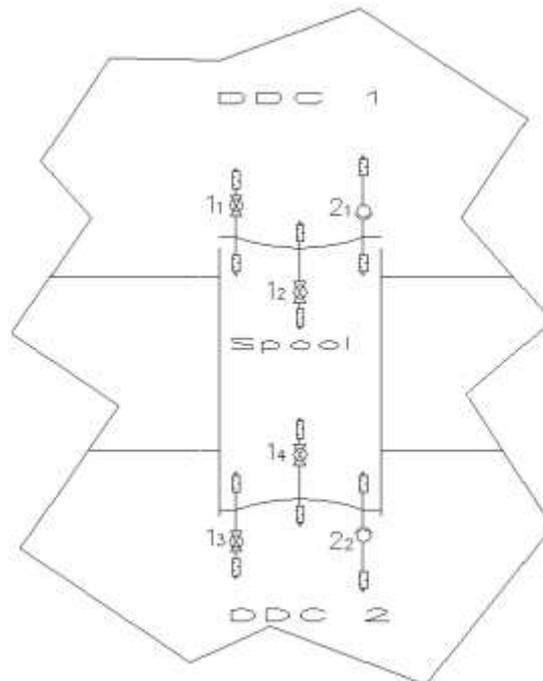


FIGURE 1. ORIGINAL CONFIGURATION

THE NEW CONFIGURATION PROPOSED ALLOWS THE PRESSURIZATION AND DEPRESSURIZATION OF THE SPOOL BY AN EXTERNAL VALVE SYSTEM.

TO PRESSURIZE THE SPOOL, THE EXTERNAL OPERATOR CAN OPEN THE PRESSURIZATION VALVE OF THE CHAMBER PRESSURIZED AT THE LOWER PRESSURE (FOR EXAMPLE V4-5 ON FIGURE 2) AND WILL BE ABLE TO CHECK THE ACTUAL PRESSURE INSIDE THE SPOOL ON PRESSURE GAUGE M3-1.

WITH THE NEW CONFIGURATION IT WILL BE POSSIBLE TO COMPLETELY DEPRESSURIZE THE SPOOL TO OBTAIN A BETTER INSULATION BETWEEN THE CONNECTED CHAMBERS. TO DEPRESSURIZE THE SPOOL, THE EXTERNAL OPERATOR OPENS VALVE V4-8 AND CAN CHECK THE PRESSURE INSIDE THE SPOOL ON PRESSURE GAUGE M3-1.

THE ORIGINAL CONFIGURATION WILL BE MAINTAINED IN ORDER TO ALLOW THE INTERNAL DIVERS TO BE ABLE TO PERFORM THE EQUILIBRIUM OPERATION.

TO IMPLEMENT THE MODIFICATION, NEW GAS SCHEMATIC AND SPOOL BODY DRAWINGS WILL BE SUBMITTED TO THE CLASS FOR APPROVAL.

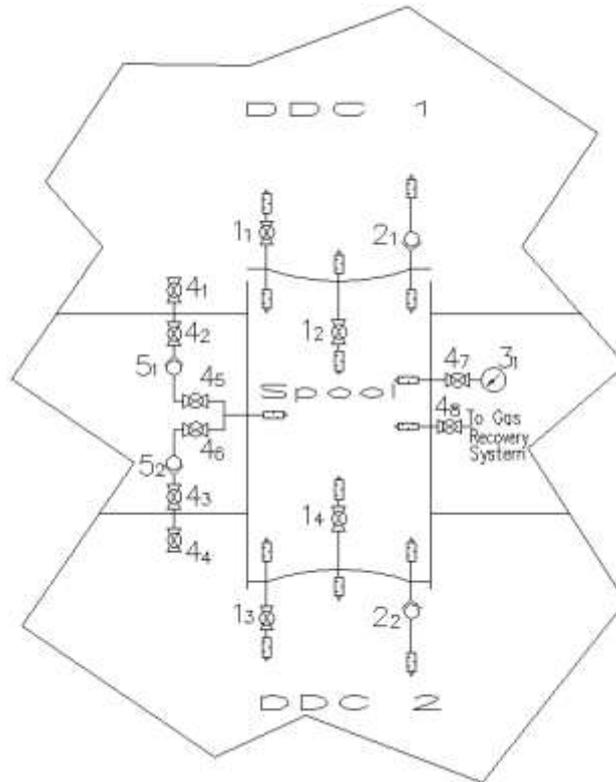


FIGURE 2. NEW CONFIGURATION PROPOSED

TO MAKE THE MODIFICATION IT IS NECESSARY TO:

- REMOVE THE INSULATION FROM THE SPOOL
- CREATE 3 THREADED HOLES (1/4" NPT) ON THE SPOOL
- PERFORM A HYDRAULIC TEST ON THE MODIFIED SPOOL AT 47.1 BAR
- REINSTALL THE INSULATION AROUND THE SPOOL
- INSTALL 2 VALVES (ONE ON THE INTERNAL AND ONE ON THE EXTERNAL SIDE OF EACH HYPERBARIC CHAMBER) ON A SPARE COUPLING ON EACH HYPERBARIC CHAMBER
- INSTALL THE NEW COMPONENTS ON THE SPOOL
- CONNECT THE NEW COMPONENTS WITH THE HYPERBARIC CHAMBERS (PIPING ACTIVITY)
- PERFORM A LEAKAGE TEST OF THE NEW SYSTEM (CHAMBERS AND SPOOL TOGETHER) AT 31.4 BAR

IT MUST BE NOTED THAT IN ORDER TO PERFORM THE MODIFICATION ON THE SPOOL BODY IT IS NECESSARY TO DISCONNECT THE SPOOL.



A MOVING / HOISTING SYSTEM FOR SPOOL, PORTABLE MAGNETIC DRILL MACHINE AND PLUG/CLAMP FOR HYDRAULIC TEST NEED TO BE SUPPLIED BY THE SHIP.

THE COMPONENTS THAT WILL BE INSTALLED ON THE CHAMBER/SPOOL WILL INCREASE THE WEIGHT BY A MAXIMUM OF 5 KG.

THE WEIGHT OF THE SPOOL IS APPROXIMATELY 1300 KG. (IN THE CASE OF HYDRAULIC TEST IT IS NECESSARY AN ADDITIONAL WEIGHT OF 260 KG.)

THE TOTAL WEIGHT OF THE CLAMP SYSTEM IS 760 KG (380 KG PER SIDE).

THE TWO COVER PLUGS FOR HYDRAULIC TEST HAVE A TOTAL WEIGHT OF 200 KG (100 KG PER PLUG).

FOR A QUOTATION AND FURTHER INFORMATION REGARDING THIS MODIFICATION, PLEASE CONTACT [CLAUDIA.RAMIREZ@DRASS.IT](mailto:CLAUDIA.RAMIREZ@DRASS.IT); WITH [SALES@DRASS.IT](mailto:SALES@DRASS.IT) IN C.C., WITH REFERENCE TO "CONNECTING TRUNK PRESSURE CONTROL FD40 - 00xx" AS THE SUBJECT.

#### REGOMMENDATIONS

1. USE ONLY DRASS ORIGINAL UPGRADE KIT
2. RECORD THE MODIFICATION IN THE DOCUMENTATION OF THE DIVING SYSTEM
3. REPORT THE EXECUTION OF THE IMPROVEMENT AS PER OEM RECOMMENDATIONS TO THE CLASS SURVEYOR DURING THE ANNUAL SURVEY.