

## ITEM: PACKING RUBBERS

### FINDING: PACKING RUBBERS OVERCOMPRESSED/ SHOWING EXCESSIVE IMPRINT



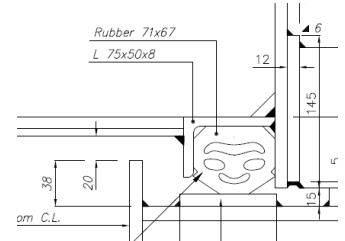
Perimeter rubber  
overcompressed



Packing rubber with  
permanent imprint



Packing rubber with  
permanent imprint



Hatch cover drawing

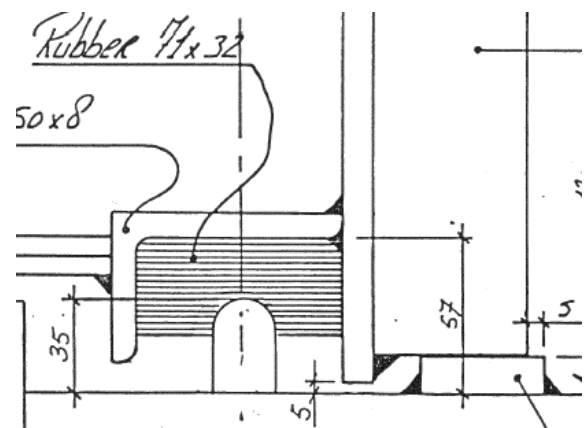
## WHY IS THIS A PROBLEM?

### TECHNICAL DATA: PACKING RUBBERS

- Packing rubbers are the second barrier against water ingress (1<sup>st</sup> barrier : panel structure)
- Packing rubbers are designed to be compressed to a certain extent in order to keep sea water out in all weather conditions; this is called the design compression
- Rule of thumb for rubber compression:
  - Square type: design compression is 25% of the rubber thickness. So rubbers with dimensions 94x50 mm will have a design compression of 12-13 mm
  - CAT-seal: standard design compression is 12-13 mm
  - Details of your packing rubbers and their design criteria can be found in your hatch cover manual!
- The reason for over-compressed packing rubbers very often lies with the alignment of the panels: issues on the steel-to-steel contact on bearing pads, stoppers and locators. But rubbers also develop a permanent imprint when they age.

### ISSUE WHEN RUBBERS ARE OVERCOMPRESSED / SHOW EXCESSIVE PERMANENT IMPRINT

- When rubbers receive excessive compression over a length of time, they lose elasticity and develop a permanent set
- They will thus lose their capacity to compensate for relative movements
- Packing rubbers should be replaced once the permanent imprint reaches 50% of the design compression, in order to maintain weathertightness



## WHAT KIND OF FEEDBACK IS EXPECTED?

### CORRECTIVE ACTIONS

- Evidence such as delivery notes for spares and photos of installation of new parts

### PREVENTIVE MEASURES

- Details on your assessment of the reason for the over-compression
- Details on repairs which address the reason for the over-compression