

As the global leader in the BWTs industry, Techcross is dedicated to providing optimal support for safe and efficient ballast water management on ships. However, due to the advanced technology involved, users unfamiliar with the equipment may encounter various issues.

This technical bulletin aims to share quick and effective solutions for frequently reported defects, based on real cases analyzed up to recently. In the event of these issues, users can troubleshoot using this guideline or report the results to the Techcross AS team for faster resolution. If you require any additional support, please do not hesitate to contact us at [as.managers@techcross.com](mailto:as.managers@techcross.com).

### [CODE100] P.S pressure high / T.S Temperature high

By measuring the temperature and pressure of the ECS, if they exceed the reference values, the system operation will be shut down to prevent safety issues. However, if the shutdown is due to a different issue rather than an actual temperature/pressure problem, it may cause inconvenience to the user. Therefore, please diagnose and resolve the issue using the following methods.



1. Check the pressure and temperature by Pressure & Temperature Indicator. (Press' : below 4.5 bar, Temp : below 45°C )

2. In case of over pressure & temperature, check if ECU Out. & In. Valve open.



3. In case of below 4.5 bar or below 45°C , please measure the resistance of switch terminal block '1' to '3'.

- 3-1. If the resistance of P.S or T.S is 0Ω, it is needed to be replaced.
- 3-2. If cable connector is disconnected, it can be used temporarily.

4. In case of the resistance of P.S or T.S is "O.L.", ESJ signal board is defective and swap test with normal ESJ signal board is required.



- 5. Open ESJ and check signal board.
  - 5-1. Non-ex ECU : ESJ is installed at ECU.
  - 5-2. EX-ECU : ESJ is installed at Safety zone.

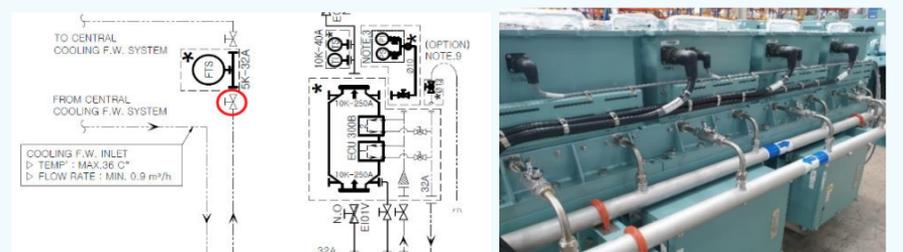
6. Carry out the swap test with normal ESJ Board. (Dip switch setting (red box) shall also be swapped.)

7. In the event of a defect, please inquire to Techcross AS team with the troubleshooting results that were conducted for a swift process.

### [CODE603] F.W Temp High

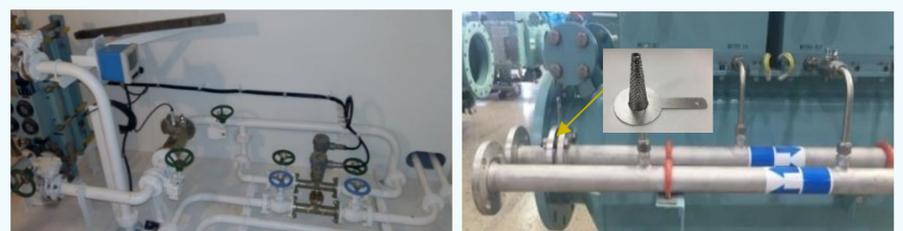
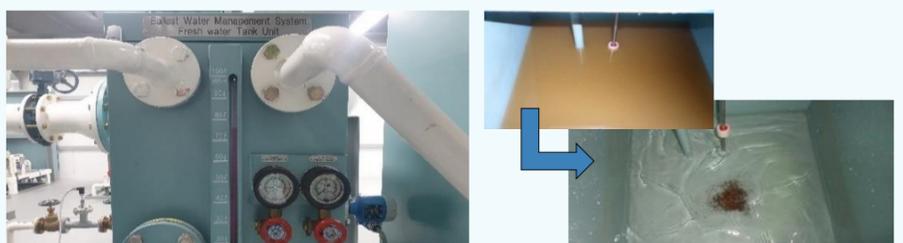
The PRU (Power Rectifier Unit) is a core component of Techcross BWTs, and to maintain the quality of this component, the cooling water temperature must be consistently maintained. For stable operation of the system and to prevent malfunctions, please refer to the following for maintenance.

In case of Central Cooling system (FTU & HEU not installed)



1. Check if valves for cooling line open and circulation status is normal
2. Clean the Strainer in Cooling pipe.
3. Close the outlet valve (red circle) for cooling line.
4. Dismantle outlet tube of each PRU and check with ball v/v whether cooling line is clogging. If cooling line is clogging, clean it by air blowing.

In case FTU & HEU is installed



1. Check if fresh water is supplied in FTU.
2. If water in FTU is dirty, drain it out and refill the fresh water.
3. Check if Cooling line valves open.
4. Clean the Strainer in Cooling pipe.

### NOTICE

Techcross BWTs Periodical Survey Support Service Program launched from May 2024.

We have launched a service program to support the BWTs tasks for vessels subject to regular inspections. For more details, please contact our AS manager at [as.managers@techcross.com](mailto:as.managers@techcross.com).