

Change Note		CN-053
Change to: Technical Assumption 69		
Description: Scaling assessment presence of TMV or TRV		
References: Test regime paragraph 2.26, Scaling assessment		
Change originator: FV		Date of request: 30/06/21
Rev: 01	Date authored: 21/09/21	Proposed change to assumption: N

1. Proposed Approach

It shall be noted if the HIU has a TMV or TRV on the output of the DHW plate heat exchanger.

Criteria as previously.

2. Rationale (underlying basis for the change)

The build-up of scale will reduce the outputs of plate heat exchangers and lift return temperatures, so ultimately requiring the plate heat exchanger to be descaled or replaced. Scale also provides a medium for bacteria to grow on, so avoiding scaling can reduce associated risk from biological contamination.

At temperatures above 60 °C, the rate of scale precipitation significantly increases, hence the Test has some criteria that seek to indicate if the DHW exceeds 60 °C at any time in DHW plate heat exchanger.

Scale will form at lower temperatures so the criteria is 55 °C for conditions where the plate heat exchanger will be at the this temperature for longer periods e.g. during standby or at the end of a DHW draw-off.

As such the cautious approach is to assume HIUs with TMVs have higher scaling risks. The manufactures could discuss with the Test House the possibility of measuring the DHW temperature at the heat exchanger output. This measurement would be additional to the Test but, would allow the Test criteria for scaling to be applied on an HIU with a TMV/TRV.

3. Impact of change (e.g. implications for test rig)

N/A

Evaluation of change			
Date evaluated: 30/06/21	Those present: GJ, RH, SC, MO & FV	Additional info required?: N	Modification to proposed approach?: N
Details: Confirmation of scaling assessment criteria			
Signed off: Yes			