



Limitorque

January 27, 2023

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington DC 20555-0001

Subject: 2nd Interim Notification Report of Potential Part 21 on Peerless 56 frame DC Motors

Reference: ADAMs Accession No. ML22342B140

Dear Sirs,

This letter is a follow-up to our initial notification of a potential Part 21 condition being evaluated by Flowserve- Limitorque. Limitorque continues to evaluate the deviation described in the initial notification (copied below). To date, Flowserve has completed a review of archived Limitorque environment and seismic qualification reports which included tests of actuators equipped with DC motors. Also, the motor OEM has complete their review of current bills of materials for the various models of DC motors built in a 56 frame size to ensure that motors manufactured today are in compliance with the construction of the originally qualified design. Ongoing activities include finalizing a seismic analysis of the as found condition.

The final result of the evaluation is expected to be issued on or before 02/24/2023. Technical questions related to this issue can be directed to Kyle Ramsey, Principal Engineer, Nuclear Products at kramsey@flowserve.com

Initial Notification:

Flowserve – Limitorque received information from Entergy Waterford 3 on 10-5-2022 that during routine maintenance involving partial disassembly of a Peerless 125 volt, 25 ft-lb, 56 frame DC motor, the motor was found to have two fasteners securing the brush holder ring assembly to the motor frame while the motor frame machining has provision to accommodate four fasteners. Investigation into Limitorque actuator environmental and seismic qualification records indicate that the DC motor assembly used in the qualification test program was assembled with four fasteners. Therefore, the use of two fasteners in the assembly in lieu of four fasteners constitute a deviation to the qualified design. Flowserve is evaluating this deviation to determine whether the condition could potentially affect the safety related function of DC powered Limitorque SMB/SB/SBD actuators.

This brush holder assembly mounting configuration is unique to Peerless -Winsmith DC electric motors built in a 56 frame size. Peerless – Winsmith DC motors with start torque ratings of 2, 5, 7.5, 10, 15 and 25 ft-lb. are built in a 56 frame size. Flowserve continues to work with the motor OEM to refine the scope of potentially affected motors through research of historic assembly records.

Limitorque actuators equipped with Peerless – Winsmith DC electric motors with start torque ratings of 40 ft-lb and larger are not affected by this issue. Limitorque actuators equipped with AC powered electric motors are not affected by this issue.



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If there are questions, or addition information is required, please contact Chris Shaffer, Quality Manager (434) 522-4136.

Sincerely,

A handwritten signature in black ink, appearing to read "C. Shaffer", written over a horizontal line.

Chris Shaffer
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