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REASON FOR UPDATE: Clarification of wording regarding the external gauges

Changing role of responsible party to a current role that exists

Redefined display accuracy

ASSOCIATED DOCUMENTS: F-Form Ref: F202

1. PURPOSE

1.1 To provide a procedure for the calibration of a pressure transducer.

2. SCOPE

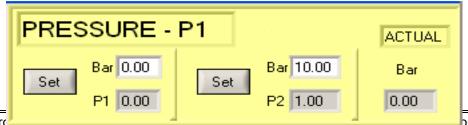
2.1 This document applies to all those involved with the calibration of a pressure transducer probe that is wired in to a computer via an amplifier or digital display.

3. **RESPONSIBILITY**

3.1 The Test Room Manager is responsible for updating and communicating the details within this procedure.

4. PROCEDURE

- A. **Transfer Standard:** Calibrated using equipment that is traceable to national/international standard.
- B. Computer Accuracy: The reading is accurate to 0.1 (bar or psi) for each recorded value.
- C. **Display Accuracy**: The reading is accurate to 1% of the full scale deflection for each recorded value.
- D. Pressure Calibration Process:
- 1. Make sure the computer program is in calibration mode.
- 2. Make sure there is no damage etc. to any part of the system.
- 3. Calibrate using equipment that is traceable to national/international standard.
- 4. Take an initial reading when the pressure is set to zero by releasing the pressure in the rig and allowing a reading to be taken by the computer and the external calibration system.
- 5. Record the external calibration system value on the form.
- 6. Record the actual pressure reading on the screen on the form.
- 7. Input the actual pressure from the external calibration system in to the correct box on the screen (box above P1).
- 8. Press the Set button (beside P1) to capture the current voltage value.
- 9. Record the actual pressure reading on the screen on the form.
- 10. If there is an external (analogue or digital) display reading then record on the form



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- 11. Then set the pressure at a maximum value (using the rig or an external pressure supply) and again allow a reading to be taken by both the computer and the external calibration system.
- 12. Record the external calibration system value on the form.
- 13. Record the actual pressure reading on the screen on the form.
- 14. Input the actual pressure from the external calibration system in to the correct box on the screen (box above P2).
- 15. Press the Set button (beside P2) to capture the current voltage value.
- 16. Record the actual pressure reading on the screen on the form.
- 17. If there is an external display (digital or analogue) reading then record on the form.
- 18. The pressure then needs to be checked at two equal intervals between the minimum and maximum values that have previously been applied.
- 19. After applying pressure at the first interval allow a reading to be taken by the computer and the external calibration system.
- 20. Record the external calibration system value on the form.
- 21. Record the actual pressure reading on the screen on the form.
- 22. If there is an external display (digital or analogue) reading then record on the form.
- 23. Set the pressure at the second interval and allow a reading to be taken by the computer and the external calibration system.
- 24. Record the external calibration system value on the form.
- 25. Record the actual pressure reading on the screen on the form.
- 26. If there is an external display (digital or analogue) reading then record on the form.
- 27. If either actual value is incorrect by more than 1% of the full scale reading then redo the above until in range values are obtained.
- 28. Document these items on calibration sheet number F202
 - I. Test rig
 - II. Pressure Transducer number TT-XX
 - III. Display / Amplifier number
 - IV. Computer Input number
 - V. External calibration company
 - VI. External calibration system reference number
 - VII. Above values
 - VIII.Calibration Interval
 - IX. Next calibration due
 - X. Accept / Reject decision box
 - XI. Calibration date
 - XII. Calibrators name and signature
- 29. Check the current pressure transducer number is clear (Same number on display / amplifier)

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- 30. Place a new calibration sticker on the display / amplifier and pressure transducer.
- 31. If there is an external display (digital or analogue) add an offset label to the display if required.
- 32. Update the calibration record and store the written calibration sheet.
- 33. In instances where a display cannot be calibrated, correction tables will be worked out and provided/visible for the user.