Setting up Accelerometers as Assets in SKF @ptitude Analyst

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You will need:

- SKF Microlog AX or GX
- Portable calibrator
- Pen and paper

Fig 1. The necessities: SKF Microlog, pen and paper, and a portable calibrator.

How to set up the tests in SKF @ptitude Analyst

ICP and **Voltage** should be set up as measurements irrespective of having a handheld calibrator (ICP is a standard accelerometer point with ICP enabled).

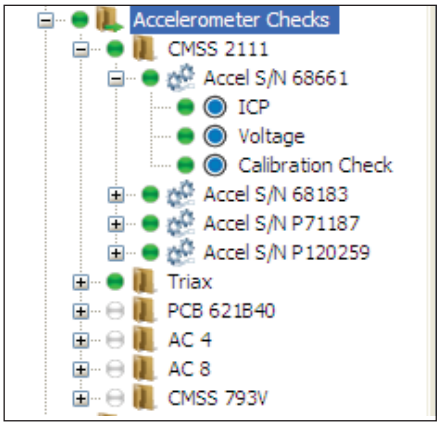

Fig 2. Accelerometer points.

In the **General** tab in the **Group Properties** window, enter the factory sensitivity in the **Description** field.

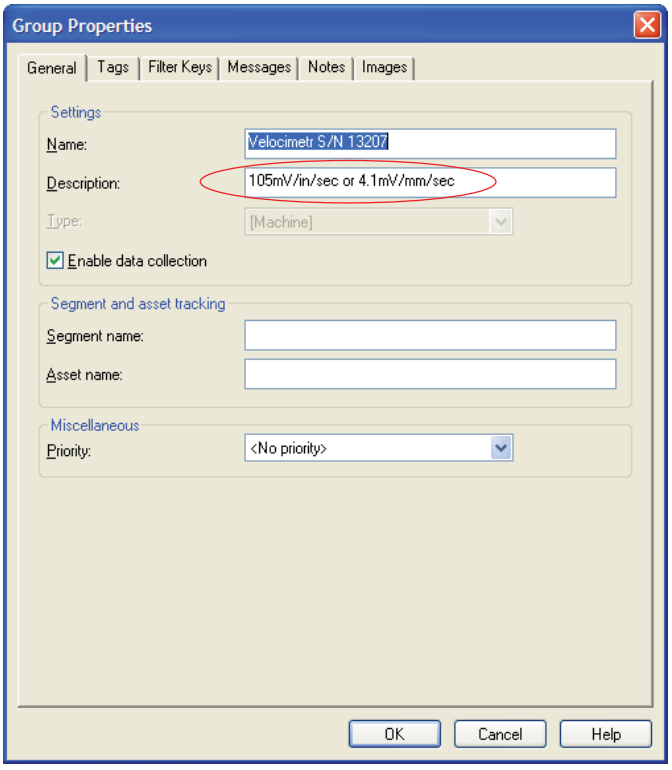

Fig 3. Group Properties window – General tab.

In the **Setup** tab in the **POINT Properties** window, the **Input mV/EU** field should remain at **100** irrespective of the sensitivity of the accelerometer.

Note: The **Detection** setting will depend on what is set on the calibrator.

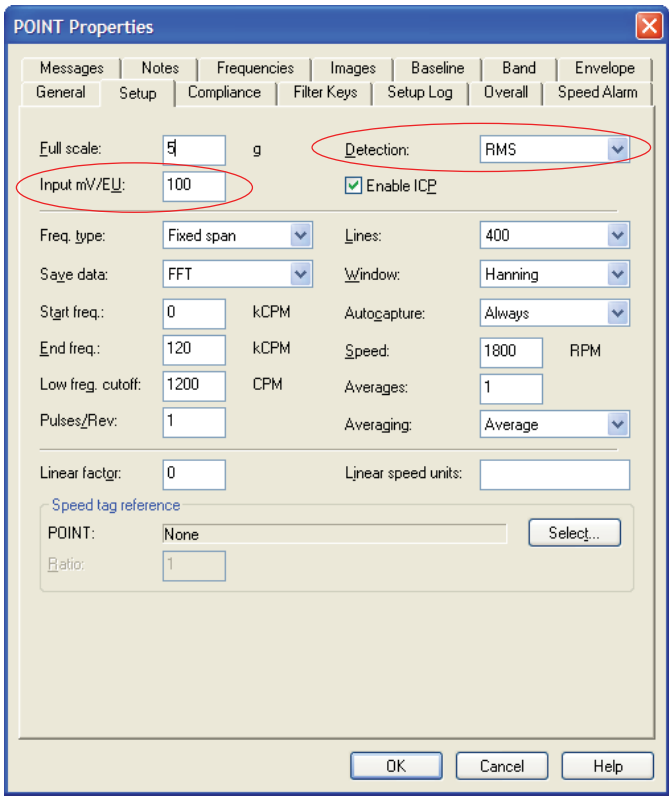

Fig 4. POINT Properties window – Setup tab.

Note that voltage is a manual data entry.

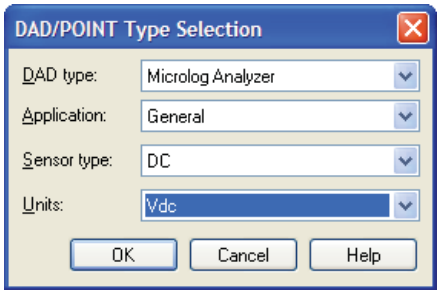

Fig 5. DAD/POINT Type Selection window.

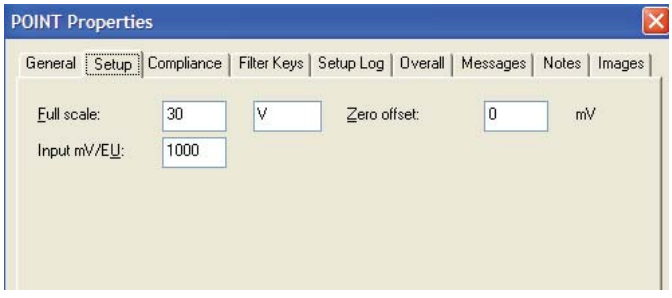

Fig 6. POINT Properties window – Setup tab.

Set the overall alarm as an **out of window** alarm.

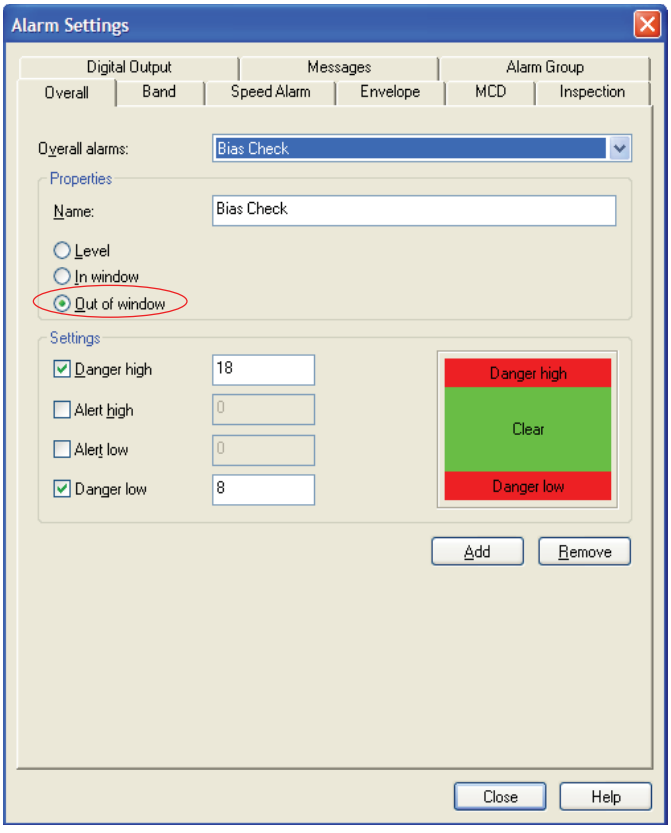

Fig 7. Alarm Settings window – Overall tab.

If you have a handheld calibrator, calibration check can be set up as a third measurement. Note that calibration check is also a manual data entry.

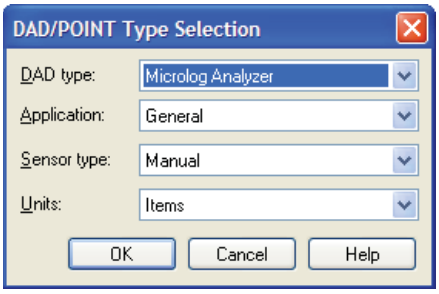

Fig 8. DAD/POINT Type Selection window.

Full scale is dependent on the factory sensitivity.

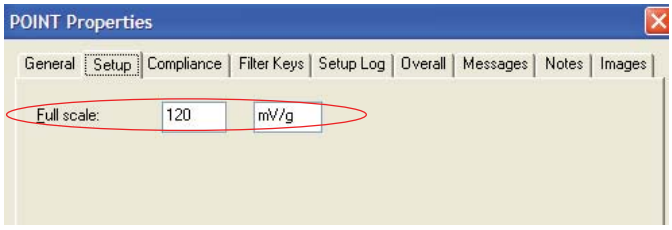

Fig 9. POINT Properties window – Setup tab.

Set the overall alarm as an **out of window** alarm with the alert levels set according to the calibration data sheet for the accelerometer, usually as a =/- % of set sensitivity:

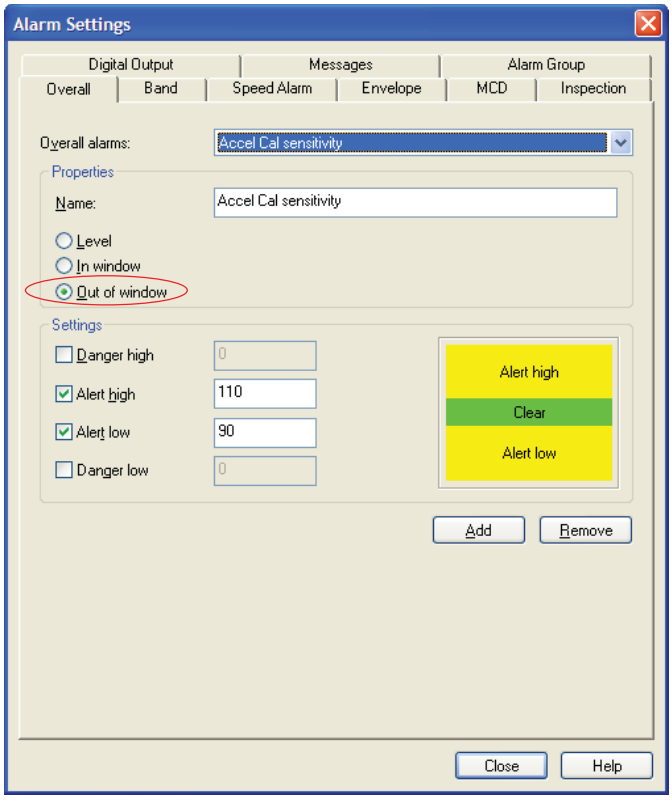

Fig 10. Alarm Settings window – Overall tab.

Route loaded onto instrument

Note: The ICP icon in the toolbar indicates that the ICP supply is on.

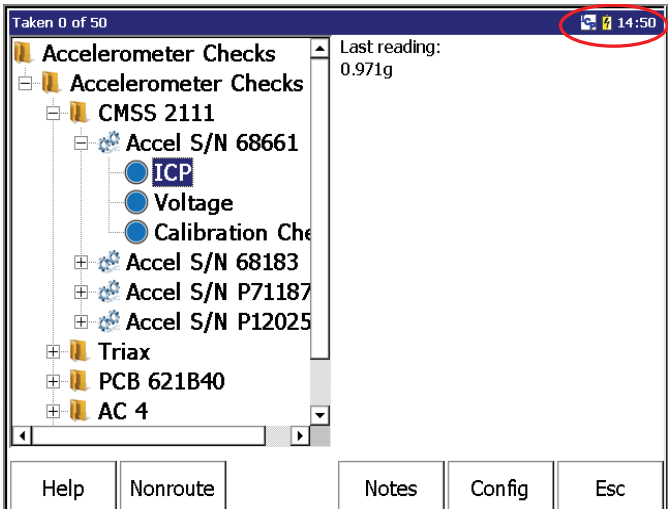

Fig 11. ICP icon indicating that the ICP supply is on.

From the ICP point, press the **shift** (↑) and **2** keys. Note down the bios voltage reading when displayed and then press **OK** to return to the route screen.

Note: If you have a triaxial sensor connected, the bios voltage for channels X, Y and Z will be displayed.

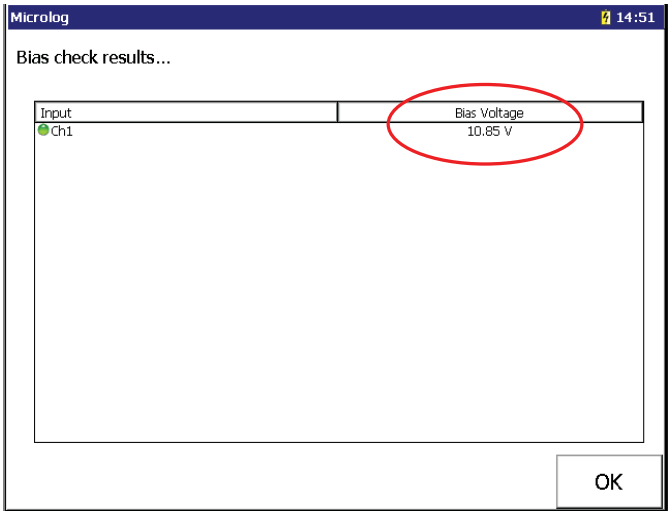

Fig 12. Bios check results.

Applicable to calibration check only

If you have a handheld portable calibrator, you can now test the sensitivity of the accelerometer and cable.

Fig 13. Portable calibrator.

Attach the accelerometer to the portable calibrator and switch it on, and then start the route measurement.

Fig 14. Accelerometer attached to the portable calibrator.

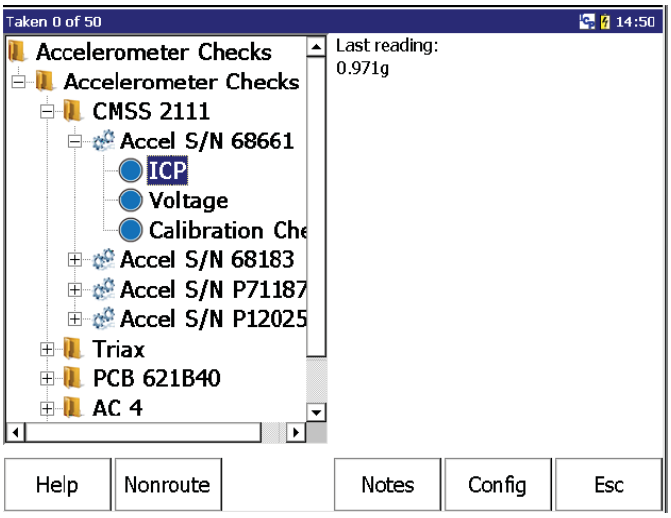

Fig 15. Taking the route measurement.

Assessing the accelerometer's actual sensitivity

Once the data has been collected, use the **Review** function to display the spectrum and use the **7** key to locate the peak.

The amplitude displayed shows the sensitivity of the accelerometer. In this case, it is showing 0.906, so the sensitivity is 90.6mV/g. Note this and return to the route menu.

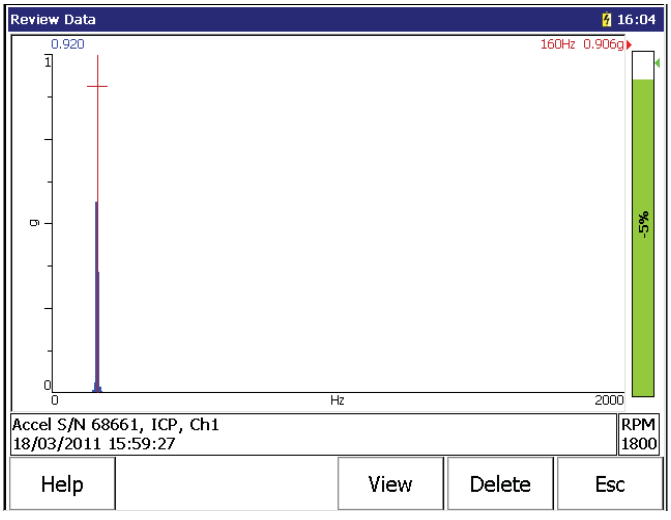

Fig 16. Review Data screen.

Manual data entry of bios voltage

Select the voltage reading to display the manual data entry screen, and then press the **Manual** function key. Use the keypad to enter the value you noted down previously and then press **Enter**.

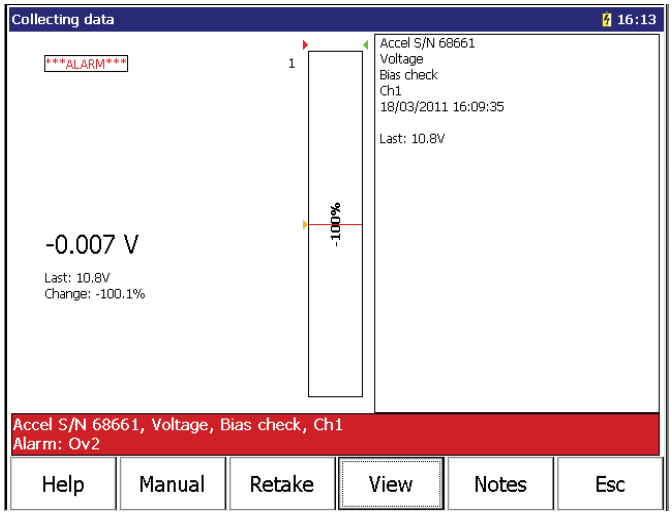

Fig 17. Collecting data screen – with alarm.

The alarm will clear and you can press the **Enter** button again to return to the route menu.

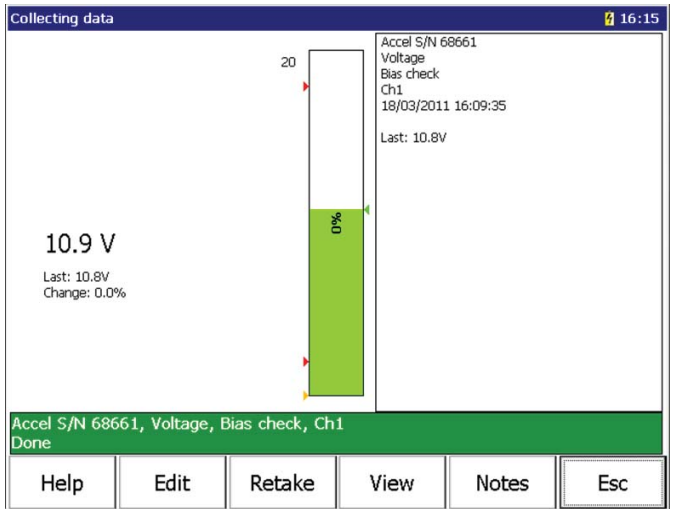

Fig 18. Collecting data screen – without alarm.

Manual data entry of calibration sensitivity

Select the calibration check reading to display the manual data entry screen and then press the **Manual** function key.

Use the keypad to enter the value you noted down previously and then press **Enter**.

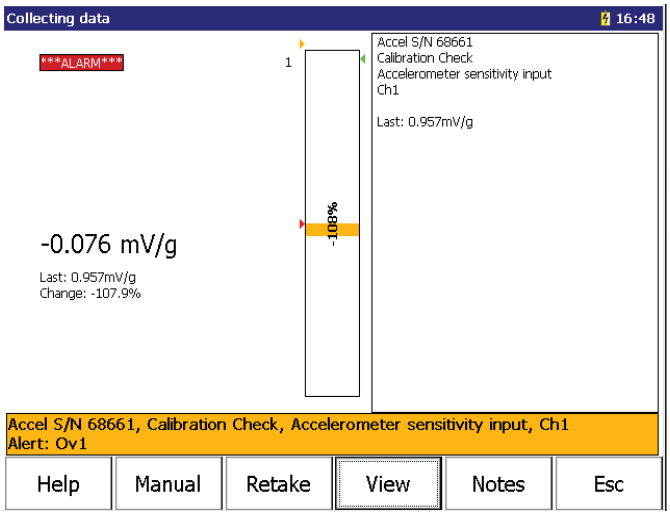

Fig 19. Collecting data screen – with alarm.

The alarm will clear and you can press the **Enter** button again to return to the route menu.

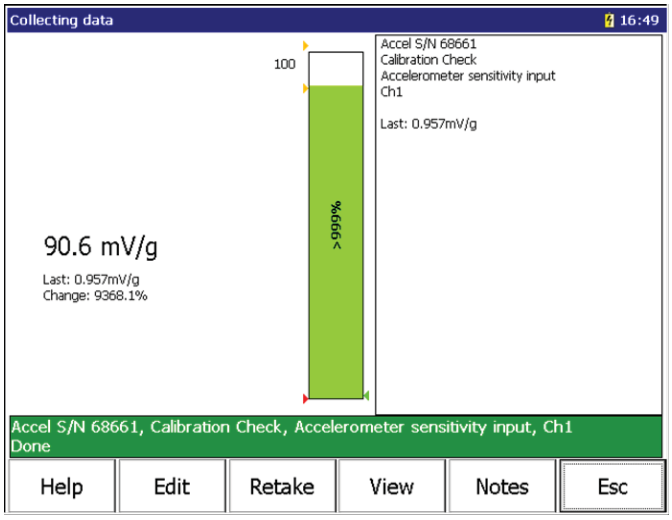

Fig 20. Collecting data screen – without alarm.

View the trend for the bias voltage or sensitivity

When finished, upload the data into SKF @ptitude Analyst and view the trend for the bias voltage or sensitivity.

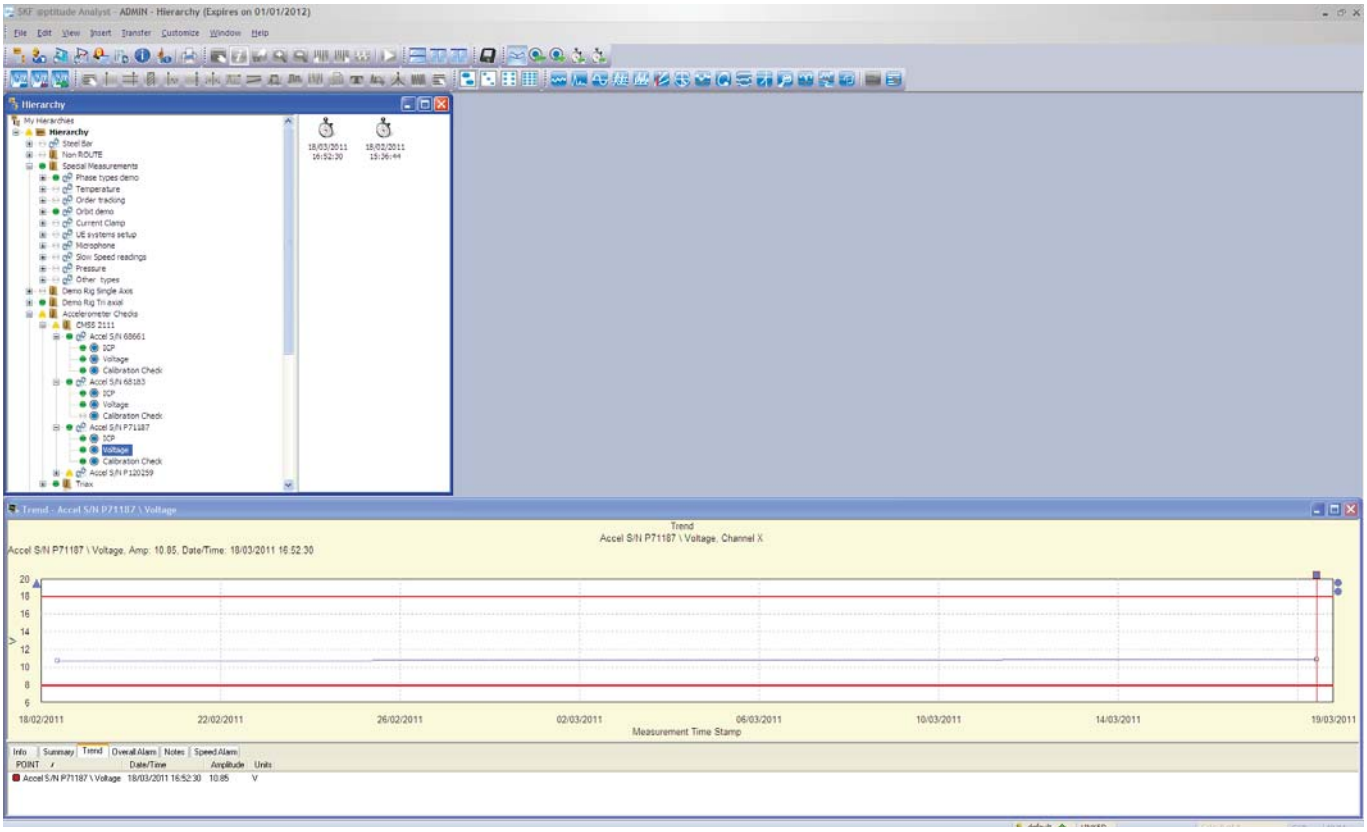

Fig 21. SKF @ptitude Analyst – Hierarchy screen.

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