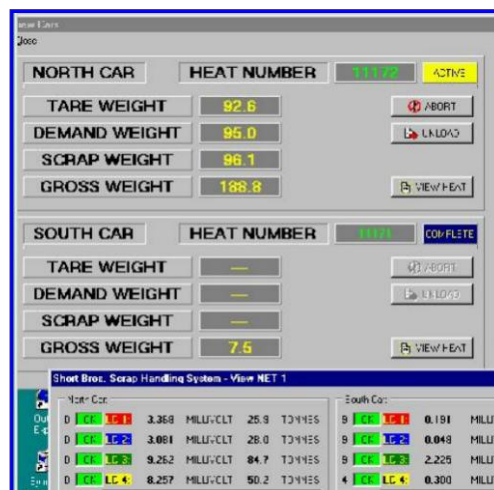




CORUS Group, BOS Plant - Port Talbot, UK

Strainstall supplied an industrial weighing system to enable precise control of scrap loaded into the Corus steel-making converters. In the scrap handling area three OHT cranes select from up to 25 scrap types to fill each of the two converter loading boxes with up to 70 tonnes per Heat. Each 90 tonne (unladen) scrap box sits on top of a winch driven transfer car, which incorporates a 400 tonne weigh platform. Each weigh platform uses four Strainstall low profile 100 tonne diaphragm compression load cells. Large digit displays in the scrap handling area show the weights of scrap loaded into each box.

Battery powered modules on each transfer car process the load signals which transmit via telemetry to the Corus pulpit and to the OHT Cranes. In the scrap loading area the OHT operators select scrap type via keypad terminals which also transmit via telemetry to the pulpit PC. The scrap heat demand information is sent from Corus via their Vax link to the scrap handling PC, where it is stored until requested by the OHT crane operators.



The system operates via Strainstall Windows NT software, which displays the scrap box loads and controls the throughput of Heat information from the Corus Vax. The bespoke software is also used to continuously monitor system health and to auto-calibrate each transfer car's weighing system.

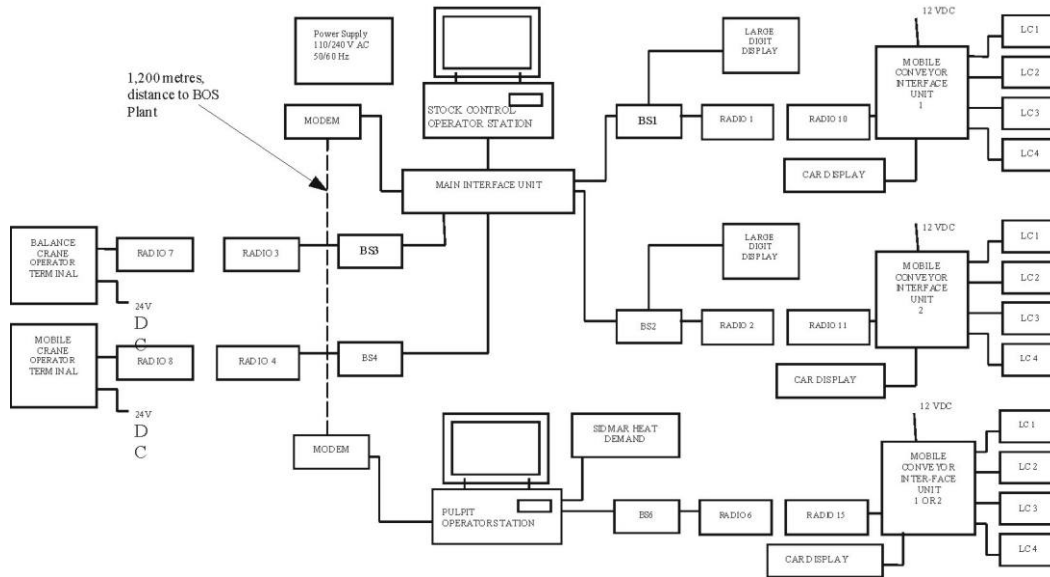
Simple to operate graphical displays enable the Heat recipe to be edited at any time.

System Features:

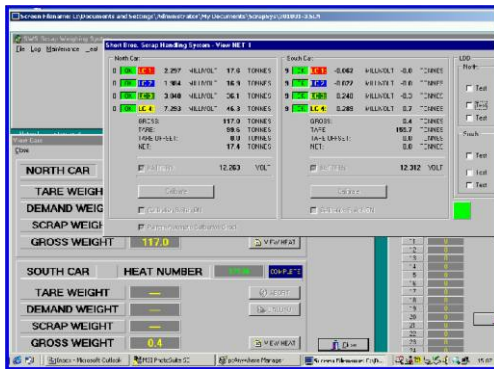
- 8 x 100 Tonne Diaphragm Load Cells
- 5 Channel Radio Telemetry
- Modular Radio and Signal Conditioning Modules
- Vax Link
- Windows NT Operation and Monitoring Software
- Automatic System Calibration
- System Health Monitoring, Event Log
- 1% Accuracy
- Remote Monitoring

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Schematic of a typical scrap weighing system. There are many other options which may be included; remote monitoring for example, provides access to the system via dial up networking. On-line checks, calibration and monitoring can be completed from off-site locations. Remote monitoring has been beneficial in reducing periods of down time. The Port Talbot system regularly achieves more than 80% availability and has helped to improve yield.



The scrap car maintenance window above permits individual load cell signal monitoring. Warning flags show if the cells have passed or failed the autocall check function. Battery volts and large digit display health checks are also shown. Any malfunction of the system is detected and a report issued to a log file.



The above window is for load cell calibration. Set-up is a simple mouse click operation using a two point calibration. Changes in zero and calibration levels can be readily detected and corrected.

The results indicated some difference across the plate which may be due to the incorrect pressure applied to the hydraulic cylinders.