



## APPLICATION STORY: SHIN-ETSU, NETHERLANDS

Japanese company **Shin-Etsu** is the largest PVC producer in the world. A re-instrumentation programme for the ethylene dichloride cracking furnace process at its facility in Rotterdam, Netherlands provided the opportunity to evaluate the benefits of fieldbus compared with conventional 'point-to-point' wiring.

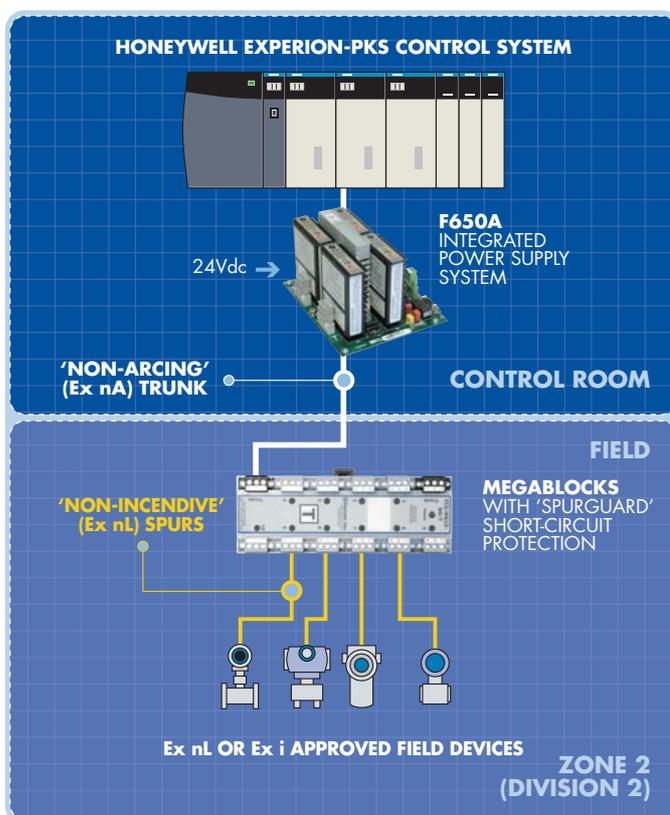
**FOUNDATION fieldbus™** was chosen for the project because it offered improved reliability of the process, simpler maintenance and superior diagnostics. In addition, FF enables single instruments such as differential pressure transmitters and vortex flow meters to measure multiple process variables, meaning that fewer field instruments would be needed. Shin-Etsu's own experience showed that 90% of field failures occurred in cable terminations, so the reduction in wiring and cabling offered by fieldbus was attractive.

Shin-Etsu selected **Honeywell's Experion-PKS controller** for the fieldbus installation, comprising 275 fieldbus instruments across 35 segments. To provide power to the fieldbus segments, the **MTL-Relcom F650A fieldbus power supply system** was chosen. The key benefits of the F650A were identified as ease of integration into the Honeywell system (being by means of a simple cable assembly), and the provision of isolation between the bulk power supply and fieldbus wiring, thereby eliminating the risk of segment failure due to multiple earth faults.

For the field wiring, Shin-Etsu chose **Megablock wiring hubs** to connect individual spur wiring to the trunk cables. A major benefit identified in the selection process was the 'SpurGuard' short-circuit protection feature, which not only maintains operation of the fieldbus segments during spur wiring faults but also permits 'live-working' on the spur wiring in Zone 2 hazardous areas. The electronic current limitation in the short-circuit protection mechanism permits an EEx [nL] classification, meaning that similarly-certified EEx nL or intrinsically safe fieldbus instruments can be connected in Zone 2.



**F650A INTEGRATED FIELDBUS POWER SUPPLY SYSTEM FOR HONEYWELL EXPERION-PKS**



'Spurguard' protected wiring hubs provide live-workable Ex (nL) spurs at Shin-Etsu, Rotterdam

