

## APPLICATION STORY: SECCO, CHINA

The ethylene cracker complex recently built in just 27 months by **Shanghai SECCO Petrochemical Co., Ltd** at Shanghai Chemical Industry Park vividly illustrates China's meteoric rise to industrial superpower status. The campus comprises nine petrochemical processing plants, serviced by the ethylene cracker plant that has an annual capacity of 0.9 million tons of feedstock.

To fully commission the entire complex in such a short space of time SECCO chose **PlantWeb®**, a digital automation control architecture supplied by **Emerson Process Management**: a decentralised, networked system with smart devices in the field interconnected using **FOUNDATION fieldbus™** technology.

In total, the installation boasts **2473 fieldbus segments**, with **14375 field instruments** out of a total of 54025 being FOUNDATION fieldbus™ devices. On average, each segment connects 6 fieldbus devices. There are **48200 loops** in total, **168000 equipment serial numbers**, and **5300 connection boxes** in the field. As may be expected, these statistics make this project the largest FOUNDATION fieldbus™ system in the world to date.

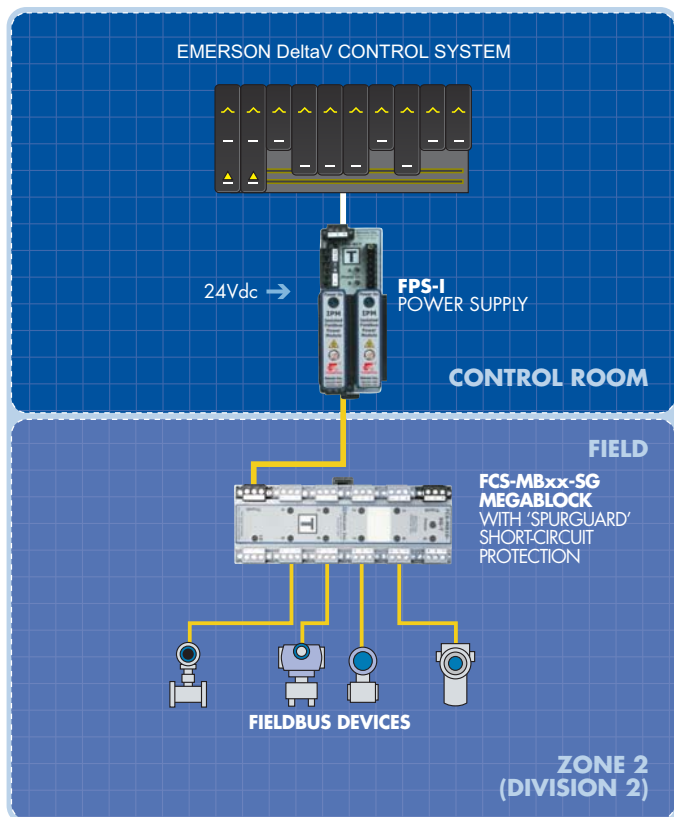
SECCO chose **MTL**, which has extensive experience and global credentials in network automation, fieldbus technology and mission critical systems. In the fieldbus segments, MTL implemented their **FPS-I redundant fieldbus power systems** for high system availability. Explosion proof cable packing glands, increased safety junction boxes and MTL-Relcom Megablock fieldbus device wiring components create a solid basis for the interconnection of large numbers of intelligent field devices. All these devices have operated faultlessly since installation.

Field devices are connected to the network trunk cable using MTL-Relcom **Megablocks**. These minimise hand wiring and also allow individual devices to be added to and removed from the segment without disrupting network communication. Megablocks carry hazardous area approvals for a variety of configurations in **Zone 1 or 2 and Division 1 or 2**. Within Zone 2 or Division 2, they may be installed as part of non-sparking (non-arcing) or energy-limited (non-incendive) circuits.

SECCO also specified **SpurGuard™** short circuit protectors with the Megablocks to prevent a short circuit in any of the individual field devices or spur cable runs from bringing the entire fieldbus segment down. In this particular project, three different junction box configurations were used to connect field devices using Megablocks with integrated SpurGuard™ short circuit protection and built-in segment terminators.



FPS-I REDUNDANT FIELDBUS POWER SUPPLY



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