



Infrared Heat Helps Plastic Pipes to Relax

A carbon infrared heating system from Heraeus Noblelight is helping to ensure that Leyland Trucks can feed sufficient volumes of polyamide (PA) pipe to its production line to meet the rising demand for trucks from its Leyland, Lancashire factory. The PA pipes are essential components within the various pneumatic systems on modern-day trucks. Leyland Trucks manufactures a wide range of vehicles. Pneumatic operating systems are a feature of all trucks and consequently there is a great need for large volumes of air-handling pipework. This pipework is delivered to the plant in large coils and stored awaiting processing. However when it is uncoiled, as with all plastics, it must be relaxed to allow it to straighten out. Conventionally, this is done by the application of heat, which slightly plasticizes the polyamide. Previously, this had been done using ceramic infrared emitters but these were slow running, took a long time to heat up and were prone to break down.

Consequently, when it was decided to improve the speed and efficiency of the coil feed line to comply with faster production line speeds, the company contacted Heraeus and after carrying out extensive tests, specified Heraeus carbon infrared heaters in place of the old ceramic models. Four 8kW carbon modules were arranged as two zones of two banks above and below the free running pipe on its way from the coils to a cutting table, where the pipe is cut to desired lengths. Control is effected through a touch screen which allows the operator to set the line speed, which is typically between 25 and 35 m/min, the cut length and the power to the emitters, which can be 40% to 70% of full load depending on line conditions. A significant benefit of the carbon emitters is that they can be switched off virtually instantaneously during unexpected line stoppages, ensuring there is no unwanted pipe damage, or when the modules need to be retracted to allow new pipe runs to be initiated.

The installation of the new pipe uncoiling and feeding system has allowed to double the pipe cutting throughput and the efficiency, reliability and fast response of the infrared system has played a large part in this.



Features

- Uncoiled plastic pipes are relaxed to allow straightening
- Ceramic heaters are replaced to make the process faster
- Efficient heating doubles pipe cutting throughput

Technical Data

- Carbon Infrared heaters
- 4 modules of 8kW each arranged in two zones
- line speed between 25 and 35 m/min
- control via touch screen

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