

Press Information

METALLOCK SPECIAL PURPOSE TOOLING GRINDS OUT DOUBLE BARREL EXTRUDER BORES FOR BASELL POLYOLEFINS

To regrind the bores of a double barrelled extrusion machine to restore parallelism and roundness along part of their length, Metallock Engineering designed and built a special purpose grinding machine based on one of its 115mm boring machines.

What was special about the extrusion machine at Basell Polyolefins UK Carrington Works, Manchester, was that the bores formed a figure eight with a gap along their length at the interface. Metallock took advantage of this gap and designed its grinding machine such that by setting up the boring bar in one bore and fitting an extension arm, carrying the grinding attachment, through the gap between the two, the second bore could be ground by traversing the grinding head along the boring bar using a leadscrew. A separate drive mechanism turned the grinding wheel at high speed.

Basell Polyolefins uses the extruder to homogenize polymer melt by feeding them down the 281.3 mm diameter bores with two archimedian screws. Over the years heat distortion and abrasion had caused the extruder barrels to become damaged resulting in operating difficulties. This was restored by regrinding the first 1.3 metres of the 9 metre long barrels at the hot end and refitting modified screws.

Once Metallock had ground the first bore, the machine was transferred to the second bore and the exercise repeated to leave the hot end of both bores in a round and parallel state.

Metallock Engineering UK Ltd has built up an extensive range of precision machining equipment specially designed for on-site situations. These machines together with a team of highly skilled site engineers and technicians, all who have many years experience on all types of projects both large and small, are building Metallock a reputation as the market leaders in on-site machining applications. They are also enabling the company to respond to customers' needs in emergencies as well as planned shutdown maintenance situations.

Milling, boring, drilling & tapping, orbital turning and facing are services regularly provided by Metallock throughout the world. Using the latest CAD software the company's engineering design team develops special purpose machines and techniques to accurately machine plant and equipment on-site to customers' specifications and requirements.



Metallock took advantage of the gap between the two bores and designed its grinding machine to locate in one bore and grind the other.

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