

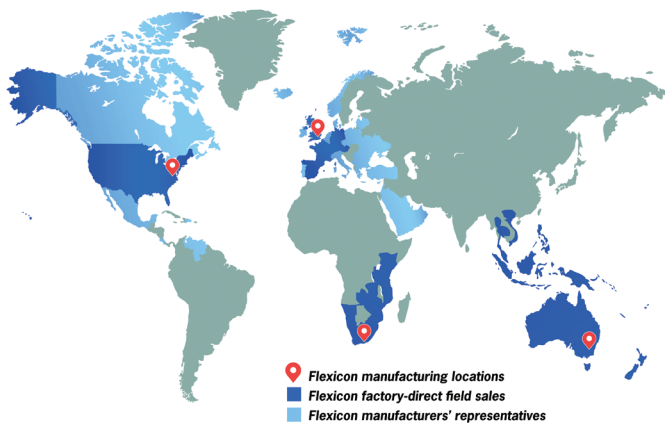
# FLEXICON CASE STUDY



The Bulk Bag Conditioner loosens pitch material as two hydraulic rams press opposite sides of the bag while the turntable rotates 90° to condition the adjacent sides.

## Solidified Pitch Loosened with Bulk Bag Conditioner

DD-0504



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## Solidified Pitch Loosened with Bulk Bag Conditioner

MORRISTON, SWANSEA, SOUTH WALES, UK — Morgan Advanced Materials & Technology Ltd needed a better way to loosen solidified pitch received in bulk bags. The solution came in the form of a BLOCK-BUSTER® Bulk Bag Conditioner, which loosens the pitch 10-times faster, and more safely, than previous methods.

Pitch is a difficult-to-handle, viscoelastic raw material that Morgan blends into a carbon base used extensively throughout its Morriston facility. Pitch's viscoelastic properties cause it to act as a solid that can shatter on impact at room temperature, even though it is actually a fluid that will flow slowly over time.

Raw pitch is imported in 700 kg (1543 lbs) capacity bulk bags from the Indian sub-continent and South East Asia. Temperature changes and long storage periods during its transportation cause the viscoelastic material to solidify, making it difficult to discharge from bulk bags and incorporate into the production process.

Handling of pitch had long posed a problem for Morgan Advanced Materials. Prior to installing the bulk bag conditioning system, a bulk bag of pitch was placed on a concrete plinth and smashed with the bucket of a backhoe, which was time consuming and messy, and raised safety concerns.

### Bulk Bag Conditioner breaks up pitch effectively, safely

Manufactured by Flexicon (Europe) Ltd, the Bulk Bag Conditioner is installed near the “front end” of the process where raw materials are blended.

Housed in a free-standing support frame, the unit measures 2210 mm (87 in.) high by 3380 mm (133 in.) wide by 1980 mm (78 in.) deep. It is equipped with two hydraulic rams fitted with specially contoured end plates, and a powered scissor lift with variable-height turntable.

Once a forklift loads a palletized bulk bag of pitch onto the conditioner's platform, the operator closes the safety interlocked doors.

From the unit's control panel, the operator programs the ram pressure, number of ram cycles, single or multiple turntable heights and degree of rotation, according to the dimensions of the bag and the conditioning required to loosen the pitch throughout the bag.

After pressing “start,” the conditioning cycle is automatic: the bulk bag is raised hydraulically to the preselected height, the end plates press opposite sides of the bag to loosen the pitch and the bag is rotated 90° to condition the adjacent sides. The system can also be programmed to automatically repeat conditioning cycles at multiple bag heights.

Properly conditioned pitch is reduced to small lumps — typically 300 x 200 x 100 mm (12 in. x 8 in. x 4 in.) or smaller in size — that can be discharged through the bag spout and proceed to a crushing process



*Raw pitch solidifies during the shipment and must be reduced to a size that can freely discharge from the bulk bag.*

where it is mixed with various carbon based products and milled to form grains and pellets.

Jeff Lloyd, Production Manager at Morgan Advanced Materials, says the bulk bag conditioner keeps busy daily and allows the company to complete the pitch conditioning process in one tenth of the time previously required, and in a more controlled and safe manner.

The company produces more than 7,000 specialized products engineered for high performance under extreme conditions.



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