Imperial Thermal Engineering

Equipment Datasheet

EPOT 300MKIII

Electrically Heated Compound Pot

With Agitator

UK Patent Application No. 1412873.0

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Contents

Introduction

The *EPOT300MKIII* is the second generation of ôHot Melt Compound Boilersô manufactured by Imperial Thermal Engineering, a quantum leap forward in the preparation of modern bituminised rubber compounds (hot-melt). The *300MKIII* has been developed with production in mind with the fastest heat up and melting times of the Epotôs to date and is powered by clean three phase electricity.

Back Ground

Historically, the heating of hot-melt compounds has been by LPG gas-fired boilers, originally known as ótar-potsô.

Using propane gas as a primary heat source, safety and quality control issues arose:-

- Compound exceeding maximum manufacturers specified temperatures
- Significant safety hazard to operators when loading (splash-back).
- Very high external temperature of the boiler body creating burn risks.
- Poor regulation of heat often exceeding the flash-point of the compound.
- Specific site controls associated with naked flames and hot works.
- Hot-works permits required reducing the working day by at least one hour.
- Large CO2 footprint from poorly manufactured boilers.

On todayôs modern construction sites gas-fired equipment is becoming unacceptable and deemed to be a significant risk. This is due to the issue of naked flames and the risk of flash fires, as a result of the proximity of chemicals and compounds used with other high technology components.

EPOT- Electric Power

Designed and built in the UK, the EPOT *300MKIII* is an electrically heated, computer controlled, compound heating pot. Using a 415v, 3 phase 32 amp supply with a simple ôplug and playô logic system, the equipment heats the compound quickly and efficiently to the desired temperature. The control software maintains the pre-determined temperature throughout the operation duration using mirroring thermocouple censoring. The control systems ensure the equipment operates at the temperature set by the manufacturer and this eliminates the risk of óflashô and vapour ignition fires. The óburnô risk to operatives is almost eradicated with the introduction of ócool sideô technology and the primary melting/loading chamber at a comfortable waste height.

Safety features

The EPOT series have been designed from the ground up to offer unrivalled safety during use.

- Touch screen control pad, locked with a digital password to prevent use by unauthorised persons.
- Cool sides to all external surfaces of the equipment using super-efficient insulation
- Safety warning neon indicator lamps during use to warn others that the equipment is in use
- Waste height primary melting chamber eliminating the risk of ósplash backô during charging
- Zero fire risk- no need for a ópot manô to stand watch during operation
- Bunded outer tank- no need for a large (whole machine) drip tray
- ôTime outô safety features
- Standby feature to reduce the temperature of the pot for long periods when compound is not required ie. overnight
- Single cable connection using steel braided reinforced cables
- Lockable pouring spout
- All aluminium vessel construction incorporating a steel frame chassis
- Self-contained rigid lifting point, certified for site use
- Pre-set temperature control that is factory set
- Even when empty the EPOT series cannot overheat.

Safe-loading mechanism

Industry First ósafe-loadô shelf that eliminates the risk of hot-melt splash back towards the operator.

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Insulated lightweight lid directly over the high level melting plates.

Once the operator has placed the block on the melting plate, the lid is closed allowing the compound to rapidly melt, pouring down into the secondary chamber.

User Friendly

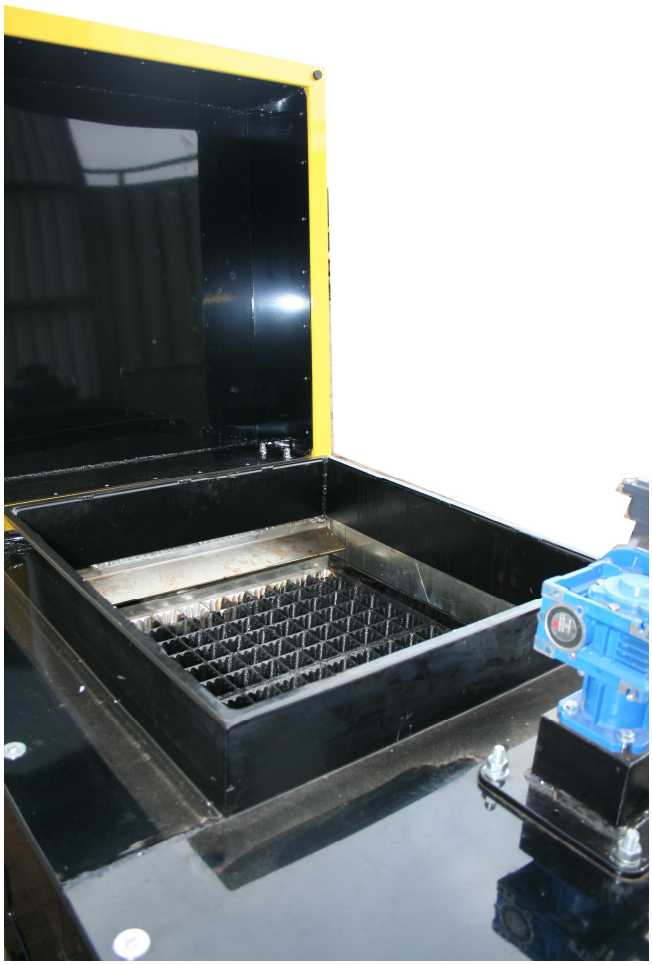
The *EPOT* series is simple to operate and manage, requires no specialist knowledge and very little training. It is not possible to over-heat the compound or tamper with the pre-set temperature setting. Constant temperature display clearly identifying the temperature of the compound inside the pot

Plug and play

Simply plug the *EPOT* into the site mains supply (see P4), and unlock the screen and press the ON button. The bright LED readout displays temperature and status.

Digital Screen display

The digital screen display provides the visiting QA engineer a valuable in-sight into the performance of the equipment. Provided with a unique access code the engineer can interrogate the equipment and view the historic órun periodsô. He will be able to see the temperature of the machine during use confirming the machine heated the compound to the pre-set parameters, under pinning the Quality Assurance process by the manufacturer.



Loading

Open the lightweight lid and place the compound blocks onto the ósuper-heatedô melting plates. Close the lid and the blocks will simply melt away. Within minutes, once melted away, re-load and repeat the process.

Agitation

Once the temperature sensors permits, the agitation process will commence, mixing and maintaining the integrity of the compound.

Manoeuvring

Solid rubber wheels mounted on a strong axle with castors to the front allow the *EPOT* to be manoeuvred by a single person.

Lifting

A lifting bar folds away when not required forming part of the forward ñDò handle. The bar is certified for lifting, even when full, by site cranes, fork lifts and other similar lifting equipment.

Locking

Provision to lock the outlet valve with padlocks.

Specifications

Power requirements

415V, 3 phase, 32A. Live & neutral required (5 pin plug).
EPOT has a 5 pole 32A male connector on the rear panel.
Power consumption: 30KVA (32 KW) whilst heating. Dropping to 12KVA (12KW) when at temperature. Normal running power consumption whilst at temperature and during the melting phase 30KW

Dimensions

Height: 750
Width: 900mm (with lifting bail stowed)
Length: 1200mm
Mass: 275Kg

Capacity

300 Ltrs
16no. 22.5kg blocks

Spout

50mm throat diameter, with an all cast knife action ñBanjoò.
420mm ground clearance to the bottom of the spout.

End.