

**Technical Project Notes TPN14.01/04**

**Fast and Safe Melting of Waxes and Solids**

**Lanolin**

William Ransom & Son plc has been developing and manufacturing natural botanical extracts and liquid pharmaceuticals for over 150 years. From traditional beginnings as a supplier of extracts of locally grown plants and herbs to the pharmaceutical trade, Ransom has grown into an internationally renowned botanical extract specialist and a major supplier of consumer health care brands.



Electrical safety concerns associated with metal clad radiant element drum heaters prompted the installation of THERMOSAFE® fully encapsulated and ATEX safety certified Induction Heaters for use with 205 litre drums of solid lanolin. Their Plant Manager stated: "Reliable, safe and consistent melting has been achieved since we installed the Induction Heaters. We are very pleased with the results achieved."



The THERMOSAFE® Induction Drum Heater is certified by Baseefa for use in potentially explosive atmospheres, and is IP66 rated, so can be hosed down even whilst in use. The induction coil is totally enclosed within a chemically resistant GRP moulding for maximum protection and safety. LMK Thermosafe Ltd manufacture a wide range of drum and container heating products used in process industries worldwide, including flexible heating jackets in a variety of sizes, materials, power levels and voltages. Standard ranges are available from stock to fit 25, 50, 100 or 205 litre drums and 1000 litre IBC containers and totes.

**Petroleum Jelly**

Many compounds in the pharmaceutical and health care industries include a proportion of petroleum jelly (commonly known in one form by product name "Vaseline"). This is usually supplied in solid form to user companies in steel drums. Most grades are very poor absorbers of heat, so it can take a substantial time using traditional radiant heating devices or steam ovens for the drum's content to be sufficiently liquid for pumping or dispensing.



Too much localised heat (such as provided by silicone band heaters) can easily burn or damage the material characteristics, but operational factors usually demand a rapid melt time. The THERMOSAFE® Induction Drum Heater has proved ideal for this purpose, especially when combined with LMK's adjustable power controller.

Power delivery can be perfectly matched to optimum heat absorption rate so that, for example, a complete melt is achieved through safe, unattended, overnight heating.



Wilmar Wilson Meier and Company Ltd, of Dublin have been very successfully using the THERMOSAFE® Induction Heater for petroleum jelly processing for a number of years. Pat Holohan comments "We simply set the drum and heater up at the end of the day, and by the following morning, the petroleum jelly is ready to use. It's an ideal solution, very reliable and completely safe".