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Improving Heating Uniformity And Energy Efficiency With Heat Lamps

PROCEDURE

- 1. Clean surfaces of any grease or surface contamination.
- 2. Apply by air-spraying or brushing to the back-side of the lamp to reflect the heat emitted by the lamp in the intended direction.
- 3. Allow to dry thoroughly at ambient temperature ideally yielding a dried layer 0.1 mm (0.004 inch or 4 mils) thickness.
- 4. After drying, energize the lamp to "cure" the coating (makes coating more resistant to damage/mechanical removal).

Boron Nitride Products - WATER-BASED COATINGS

Boron Nitride Lubricoat (white version)

<u>BN Lubricoat ZS</u> and <u>JK SD</u> are other coatings that can be considered for this application.

ADVANTAGES

- Simple/Easy Coating Application Like Housepaint
 - Air-Spraying
 - Brushing
- Improves Heat Lamp Reflective Performance by over 20% (energy emitted by the lamp in the desired direction)
- Ideal for incandescent and high-intensity arc discharge lamps
 - **O** T3 directional Quartz Infrared Lamps/Heaters
 - Quartz halogen infrared (IR) lamp systems
 - Such as used for
 - heating plastic preforms
 - curing adhesives/coatings
 - space heaters
 - outdoor heaters
 - bread toasters/ovens
- Stands up to high temperature and thermal cycling conditions

REFERENCE (NOW EXPIRED PATENT): Leonard E. Hoegler, General Electric Co (assignee), 1992. *Lamp having boron nitride reflective coating*. U.S. Patent 5,168,193.