

# ARC SPRAYED REINFORCED COATING SYSTEM FOR COOKWARE

## Application Data Sheet LE-WR-002

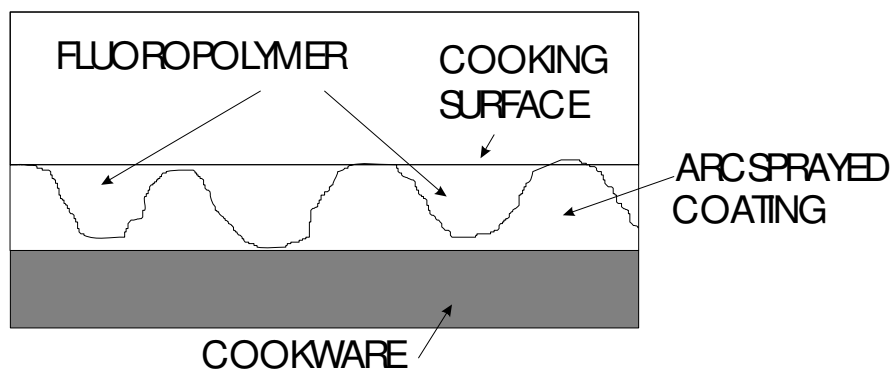
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### INTRODUCTION

The application of Arcsprayed Stainless Steel as a reinforced coating has been proven to drastically increase the working life of many types of cookware.

By producing a thin Arcsprayed layer the fluoropolymer coating penetrates the sprayed surface. This produces high bond strengths and allows the high wear resistant Arcsprayed coating to protect the fluoropolymer coating

(See Fig 1) from such items as cooking utensils.



### EQUIPMENT

Arcspray Pistol: 140F or 528E

Energizer: S350

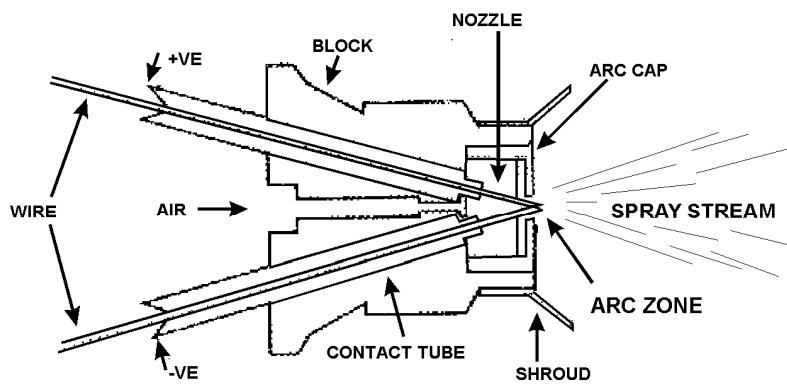
# MATERIALS

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Main Deposit: Stainless Steel or Titanium

## ARCSPRAY PROCESS

In the Arcspray process, the raw material in the form of a pair of metallic wires, are melted by an electric arc. This molten material is atomised by a cone of compressed air and propelled towards the work piece. The molten spray solidifies on the component surface to form a dense, strongly adherent coating.



Arcspray deposits possess a higher degree of bond strength than most other thermally sprayed deposits and the use of compressed air and electricity alone mean more economic coatings.

## METHOD

### Cleaning

The surface should be free from grease, oil or other contaminants as this would affect the adhesion of the sprayed coating.

### Blasting

The surface should be grit blasted; the standard of surface cleanliness required is as Swedish Standard SA3. Surfaces not being treated should be masked before blasting.

## APPLICATION OF SPRAYED COATING

Spraying should begin as soon as possible after preparation and before any visible sign of deterioration occurs. The surface speed should not be less than 60 feet per minute. (18 metres/minute).

- (A) The Arcspray Equipment should be set up in accordance with the Metallisation Manual for the spraying of St/St or Titanium wire.
- (B) The Area to be sprayed should be cleaned with a clean air blast to remove any loose particles of grit.
- (C) The Arcspray Pistol should be set so that the spray stream is at 90° to the surface being coated and traversed at an even speed giving a uniform coating.
- (D) Apply St/St or Titanium Coating to the required thickness.
- (E) Spraying Parameters Titanium
  - (i) Range 125mm (5")
  - (ii) Nozzle Air Pressure 5 Bar (72psi)
  - (iii) Voltage before spraying 36 Volts
  - (iv) Voltage during spraying 32 Volts
  - (v) Amperage 200 Amps
  - (vi) Aircap 6843AF

### Spraying Parameters St/St

- (i) Range 125mm (5")
- (ii) Nozzle Air Pressure 5 Bar (72psi)
- (iii) Voltage before spraying 29 Volts
- (iv) Voltage during spraying 25 Volts
- (v) Amperage 200 Amps
- (vi) Aircap 6843AF

**Note:** Parameters may differ in accordance with type and length of power cables being used.

### General

There should be the minimum of interruption from commencement of preparation to completion of spraying. At all times, the prepared surface should be protected from dust, dirt, moisture etc.

✦ REFERENCE TECHNICAL BULLETIN N°S :-

LE-WR-003 Plasma Reinforced Coating System for Cookware