

Brief description of the solder technique used to connect the Cu-kapton sheets on the OTE.

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Object

The main purpose of this document is to describe how the Cu-kapton sheets used on the assembly of the Outer Thermal Enclosure (OTE) have been connected.

Description of the technique

The electrical connection has been achieved by means of a soldered 3.2 mm copper conductive strip.

It connects not only the cu on the cylinder but also this copper layer to the one on the rear flange. Following there is a sketch of the system used:

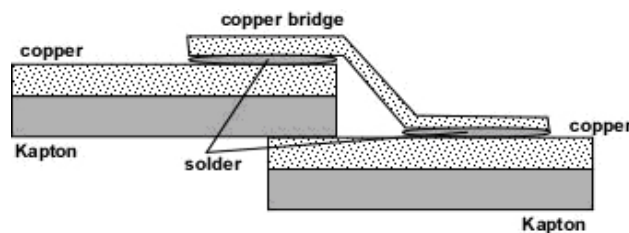


Fig. 1 Sketch view of the electrical connection

In order to preserve the soldering area and also trying to control the disposal of the solder paste, an adhesive kapton tape (temperature resistant) has been used.

The steps to follow are:

- Place the kapton tape.

Locate two strips of kapton tape spaced 3.2 mm centred with the Cu-k sheets joining line.

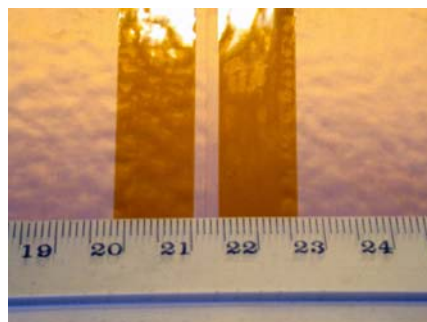


Fig. 2 Kapton tapes on place

- Close the window with two new kapton pieces spaced 20 mm, defining the working area



Fig. 3 Working area

- Polish the copper-k with a scourer to get better adherence and uniformity on the soldering.
- Add the solder paste inside the working area.
- Place the copper strip onto the solder paste and placing the soldering iron on it connect the material. In order to get a flat surface finishing without rubs or creases, a pressing tool, temperature resistant and with a good flat surface is move along the strip following the soldering iron.
- Polish again and clean. Final result is as shown on the picture:

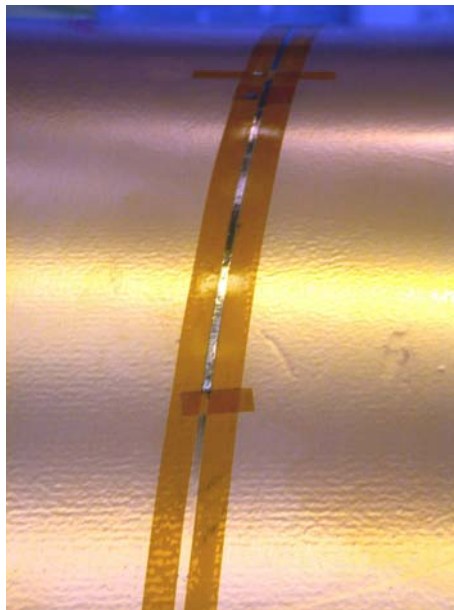


Fig. 4 Final result f the soldering

- Remove the tapes and clean again.