RADIOGRAPHIC INSPECTION

OF RESISTORS

ESCC Basic Specification No. 2094000

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DOCUMENTATION CHANGE NOTICE

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DCR No.	CHANGE DESCRIPTION
838	Specification upissued to incorporate editorial changes per DCR.

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1 SCOPE

This specification, to be read in conjunction with ESCC Basic Specification No. 20900, Radiographic Inspection, contains additional requirements for Resistors.

2 GENERAL REQUIREMENTS

2.1 APPLICABILITY

The following criteria may not be varied or modified after commencement of any inspection stage. Any ambiguity or proposed minor deviation shall be referred to the ESCC Executive for resolution and approval.

2.2 PROCEDURE

All items shall be examined in such a manner that a minimum of handling and movement of the components is involved.

3 X-RAY PHOTOGRAPHS

3.1 RESISTORS WIREWOUND

Each component shall be radiographed once in each of the 2 directions shown in Figure 1. Figure 2 shows the appearance of a typical component and indicates the terms used in this specification.

4 DETAILED REQUIREMENTS

4.1 GENERAL

A component shall be rejected if it exhibits one or more of the defects listed in the following paragraphs.

4.2 RESISTORS WIREWOUND

The drawing (Figure 3) is included to provide additional explanatory material, but shall be considered as an example only.

4.2.1 Winding

(a) Resistance wire turns not evenly spaced.
(b) Resistance wire winding not snug against the core.
(c) Average winding pitch exceeding five times the wire diameter.
(d) Effective wire coverage such that more than 20% of the overall winding area remains uncovered.
(e) Broken wire.

NOTES:

The effective wire coverage is the winding length on the core between the points of departure from the normal winding pitch.

4.2.2 End Cap and Lead

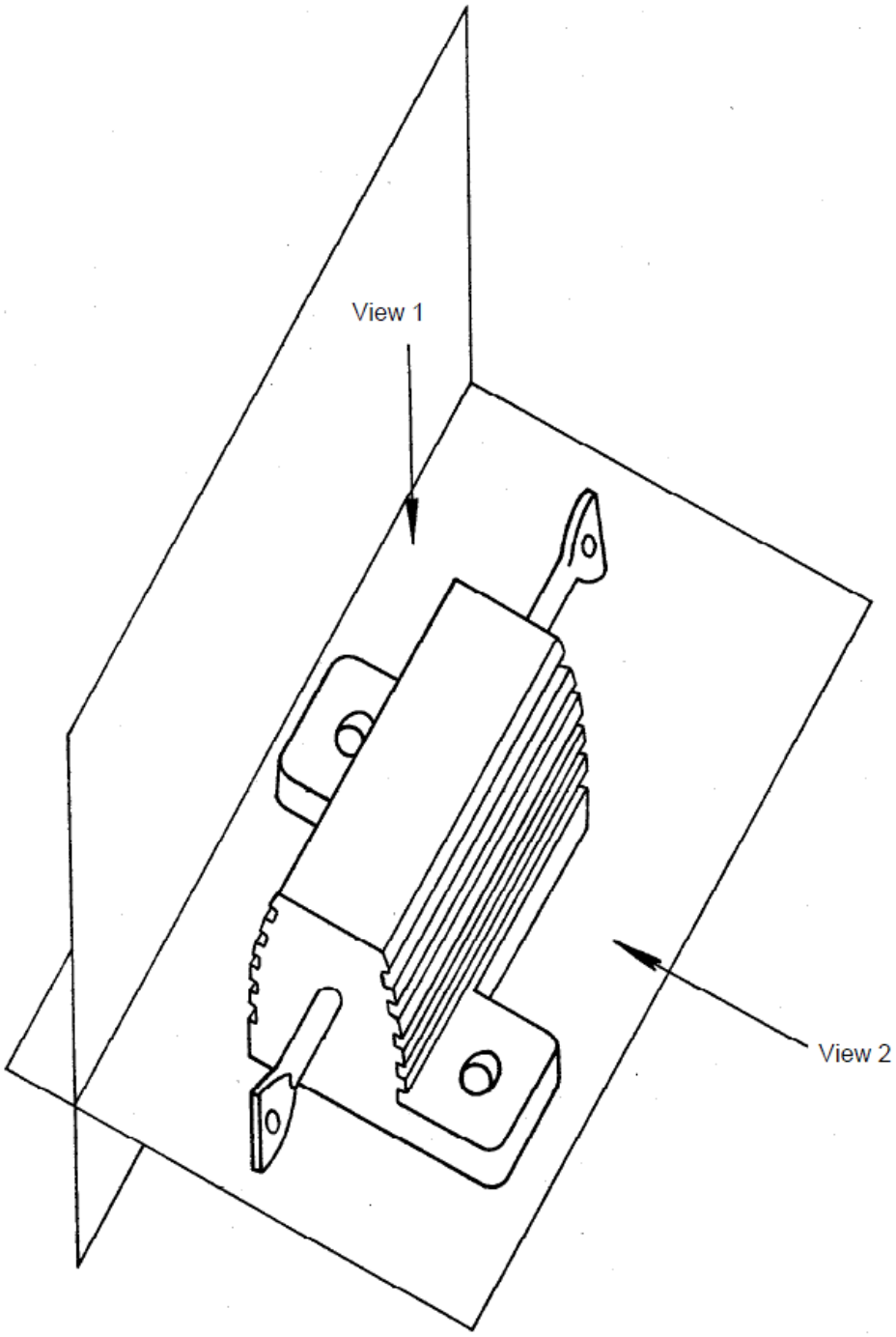
(a) Kinked lead.
(b) Distorted butt weld.
(c) End cap out of perpendicular alignment with axis of resistor element by more than five degrees.
(d) Cap improperly fitted or loose on core.

4.2.3 Assembly

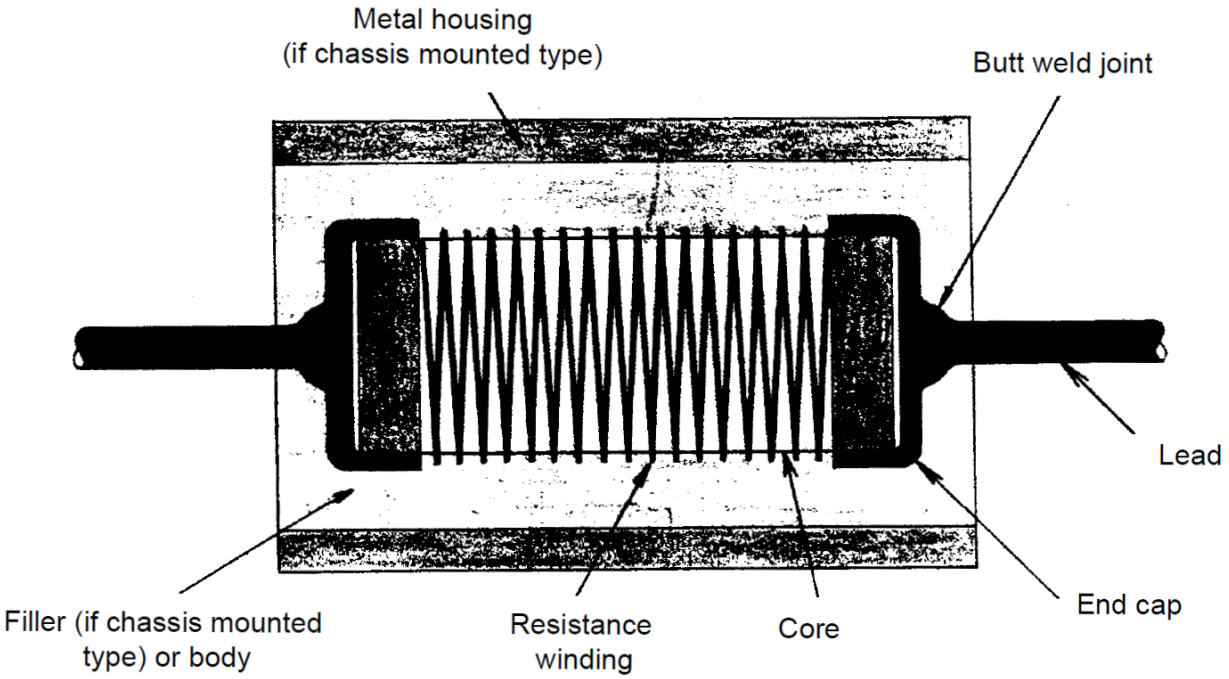
(a) Extraneous material in contact with resistance wire.
(b) Resistor element offset from axis of component by more than 10%.
(c) Extraneous material in filler or body greater than 25% of wall thickness in any dimension.
(d) Voids in filler or body greater than 25% of wall thickness in any dimension.
(e) Wall thickness of filler or body not meeting the requirements of the approved PID.

5 FIGURES

5.1 FIGURE 1: COMPONENT/EXPOSURE ORIENTATION



5.2 FIGURE 2: TYPICAL COMPONENT



5.3 FIGURE 3: POSSIBLE DEFECTS