

GUIDELINES FOR VISUAL EXAMINATION AND GRADING OF STEEL MOLDS AND PANS

Pyrotek castings are inspected to ensure they meet quality standards as referenced in this document. General visual references are illustrated for 1) slag and sand inclusions, 2) blow-holes or exposed cavities, and 3) wrinkles, as they pertain to steel products including sow molds, dross pans, drain pans, zinc pans, and other similar products. Also shown are typical typecast logo imprints that may appear on the interior of some molds.

The flash, burr, remains of cap & runner, and other metallic projections are removed so the product surface appears and feels smooth. The casting is dressed and finished to achieve a consistent surface. The finished surface is uniform in color with no visible rust, misrun, crack or hot-tear. After final dressing and shot blasting, any surface requiring regrinding is 5% or less of the inside or outside surface area, with no more than six bright grinding areas on any ground inside or outside surface.

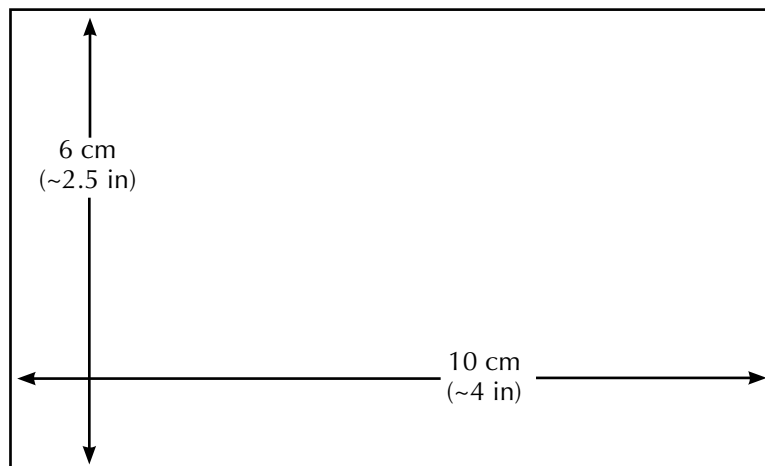
SURFACE FINISH ACCEPTANCE FOR VARIOUS CASTINGS

The following table provides an overview of acceptable surface grades illustrated in this document.

CASTING TYPE	SURFACE LOCATION	SLAG AND SAND INCLUSION	BLOW HOLE	WRINKLE
Sow mold	Inside	Grade 2 or Better	Grade 2 or Better	Grade 2 or Better
	Outside	Grade 3 or Better	Grade 3 or Better	Grade 3 or Better
Dross pan, drain pan, zinc pan, etc.	Inside and Outside	Grade 3 or Better	Grade 3 or Better	Grade 3 or Better

SURFACE AREA SIZE FOR QUALITY ANALYSIS

Grade assignments referenced in this sheet are based on examination of a specified surface area as illustrated below, 10 cm x 6 cm (~4 in x ~2.5 in).



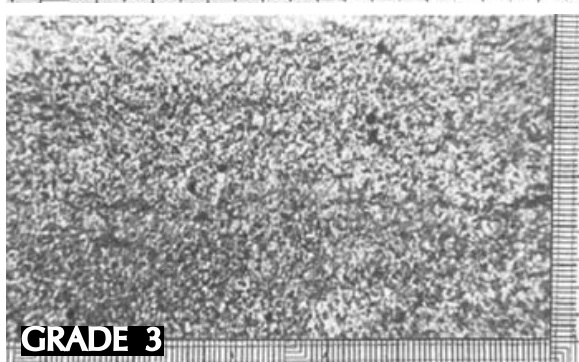
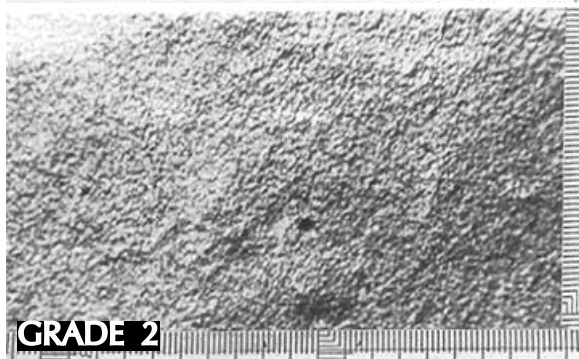
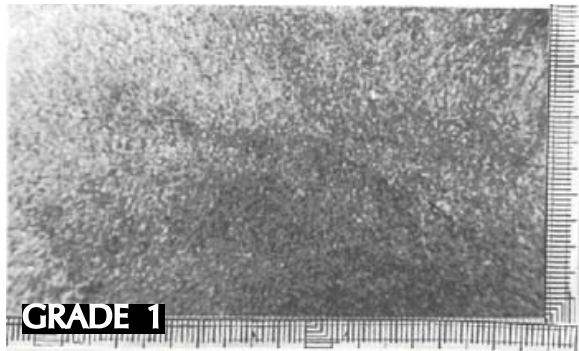
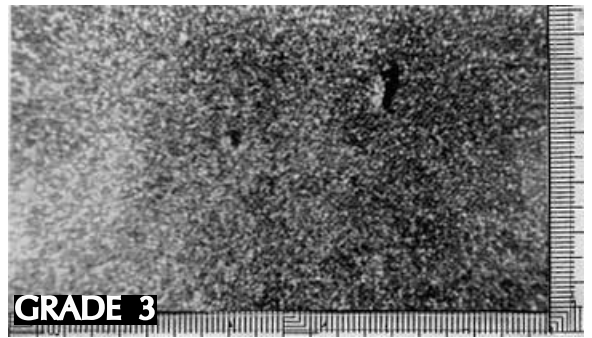
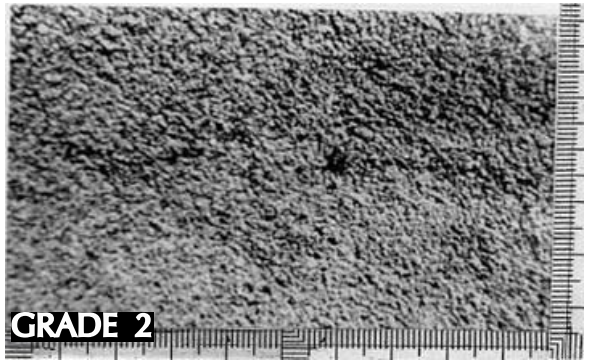
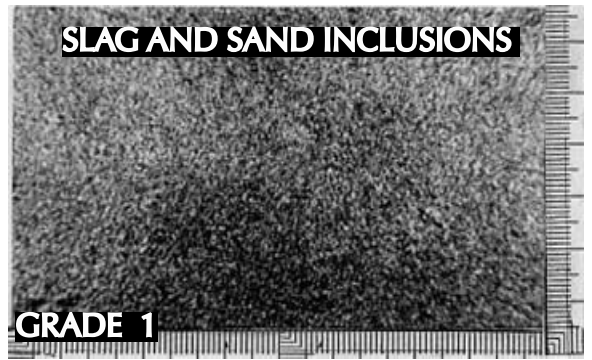
SLAG AND SAND INCLUSIONS

Slag and sand inclusions are graded according to the size and number of inclusions. [Surface area 10 x 6 cm² (~4 x ~2.5 in²)].

Grade 1 No visual slag or sand inclusion.

Grade 2 A maximum of one slag or sand inclusion no greater than 2 mm in length.

Grade 3 No more than two slags or inclusions are allowed. The largest inclusion can be no greater than 3 mm in length, and the smaller inclusion can be no greater than 2 mm in length.



BLOW HOLES

Blow holes are graded according to their size and number. [Surface area 10 x 6 cm² (~4 x ~2.5 in²)].

Grade 1 No visual blow holes.

Grade 2 A maximum of one blow hole no greater than 1 mm in diameter, and 2 mm in depth.

Grade 3 No more than two blow holes are allowed, no greater than 2 mm in diameter and 2 mm in depth.

CASTING STANDARDS FOR MOLDS / PANS

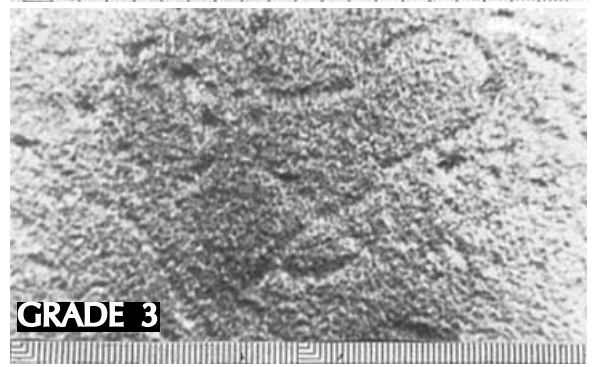
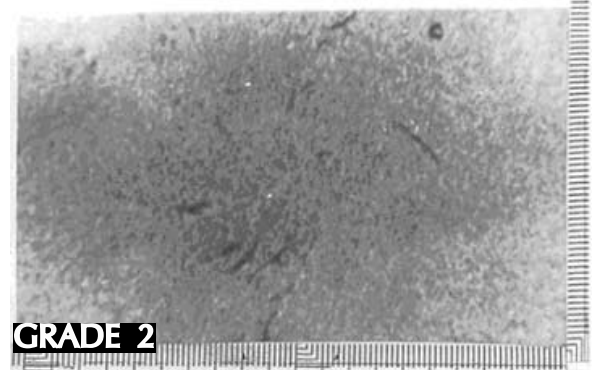
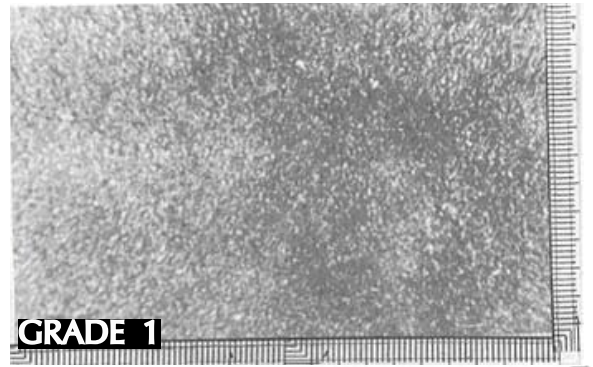
WRINKLES

Wrinkles are graded according to their size and number. [Surface area 10 x 6 cm² (~4 x ~2.5 in²)].

Grade 1 No visual wrinkles.

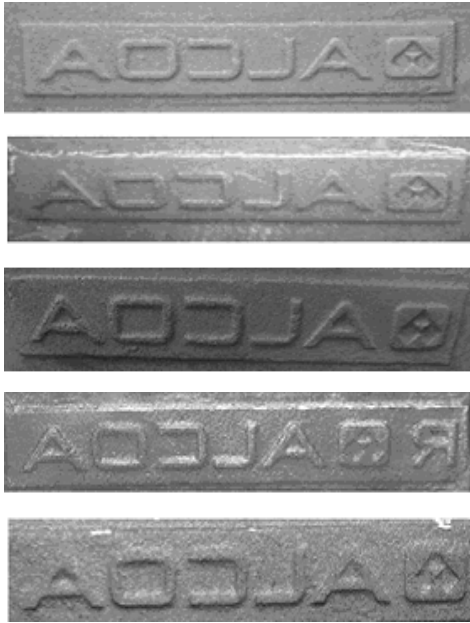
Grade 2 A maximum of four wrinkles no greater than 5 mm in length, and 1 mm in width.

Grade 3 A maximum of six wrinkles no greater than 6 mm in length, and 2 mm in width.



LOGO TYPECASTING

The contents and style of inside-mold logo typecasting must be according to the specified drawing. The following illustrations show typical imprints.



Note: The physical and chemical properties listed represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice.

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Product Type: 190

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