Casting is complete except for projecting edges which are more or less rounded. In the case of cast iron, the surface is generally shiny and is quite easily cleaned. (Ed. note - In U.S., same as E 121.)

Possible Causes
- Lack of fluidity (castability) of the liquid metal due to a pouring temperature too low for the alloy composition in question.
- Slow filling of the mold cavity because of gates which are too small.
- Inadequate venting (permeability, vents, relief risers).
- In permanent molding, low mold temperature.

Remedies
- Maintain adequate pouring temperature with regard to composition and section size.
- Check gate areas and increase where possible.
- In permanent molding, raise mold temperature.
- Increase permeability and venting of mold.

E 111 - Cast Iron, Green Sand
Alloy gray iron pillow block cover. Corners are not filled due to low pouring temperature; note shiny surface.

E 111 - Cast Iron, Permanent Mold
Gray iron permanent mold casting:

<table>
<thead>
<tr>
<th>%</th>
<th>C</th>
<th>Si</th>
<th>Mn</th>
<th>S</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.80</td>
<td>2.50</td>
<td>0.90</td>
<td>0.10</td>
<td>0.30</td>
</tr>
</tbody>
</table>

Casting at left poured between 1420 and 1450C (2588 and 2642F); casting is good. The one on the right, poured at 1350C (2462F) did not fill completely.
DEFECTIVE COATING (TEAR-DROPPING) OR POOR MOLD REPAIR

Sand Castings

In certain locations, external or internal corners of the casting are irregularly rounded or completely missing, whereas those in adjacent locations correspond to the pattern.

Possible Causes

Improper mold repair or irregular application of refractory coating to the mold or cores, forming protuberances in the mold cavity and leaving traces on the surface of the casting (often in the form of droplets).

Remedies

Care in mold repair and in the application of refractory mold coating.

E 111 - Copper Alloy, Permanent Mold

Cupro-aluminum casting (slightly less than actual size). Increase venting to permit escape of air at blade locations.