

Title (en)  
GUARD RINGS FOR VERTICAL SHAFT IMPACT CRUSHER

Publication  
**EP 0166673 B1 19900207 (EN)**

Application  
**EP 85630093 A 19850620**

Priority  
US 62488684 A 19840627

Abstract (en)  
[origin: EP0166673A2] A vertical shaft impact crusher having a rotor (24) mounted for rotation about a vertical axis on a vertical shaft (22) supported by a central bearing, and an impeller mounted on that shaft so that rock fed into the crusher is caught by the spinning impeller and thrown against an adjacent breaker ring (70), and is broken; wherein the crusher is provided with guard rings (63, 144, 142, 203) mounted telescopically and concentrically with the vertical shaft (22) forming a labyrinth seal, and also above and below the impeller to restrict the entrance of rock dust and rock fragments to the rotor shaft (22) and bearing; and a plurality of upper and lower wear plates which line the impeller to retard its erosion and are designed to be easily replaceable.

IPC 1-7  
**B02C 13/18**

IPC 8 full level  
**B02C 13/14** (2006.01); **B02C 13/18** (2006.01)

CPC (source: EP)  
**B02C 13/1842** (2013.01); **B02C 2013/1864** (2013.01)

Cited by  
CN111686903A; EP2698203A1; US5921484A; CN104722375A; GB2347880A; CN104812494A; WO2014026786A3

Designated contracting state (EPC)  
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**EP 0166673 A2 19860102; EP 0166673 A3 19861203; EP 0166673 B1 19900207**; AU 4315385 A 19860102; BR 8503061 A 19860311; CA 1232886 A 19880216; DE 166673 T1 19860522; DE 3575873 D1 19900315; ES 544585 A0 19860616; ES 8608337 A1 19860616; JP S6118451 A 19860127; NO 852544 L 19851230; ZA 854211 B 19860129

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