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(54) Title: CIRCULAR SAW BLADE

(57) Abstract: A carbide or cermet tip for an industrial circular saw blade is provided with improved geometric features that provide enhanced performance and longer life for the saw blade. The features include a bottom mounting surface opposite a flank relief surface, a back mounting surface opposite a leading face surface, each surface bounded by a first side surface and a second side surface; and a chip splitting groove formed on a flank relief of the tip. The ratio of the width of the chip splitting groove to the width of the tip, the width of the chip splitting groove, and the ratio of the depth of the chip splitting groove to the width of the tip are optimized. The tip is adapted to prevent contact of the chip with a gullet area of the circular steel saw body.

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A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - B23D 57/00 (2008.04) USPC - 83/854 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC(8) - B23D 57/00; B27B 33/02 (2008.04) USPC - 83/854, 853 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) PatBase		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,855,157 A (OKAMURA ET AL) 05 January 1999 (05.01.1999) - see entire document	8, 9, 17-20
Y		1-7, 10-16
Y	US 2005/178264 (SETLIFF) 18 August 2005 (18.08.2005) - see Para [0017]	1-7, 10-16
Y	US 4,452,554 (HOUGEN) 05 June 1984 (04.06.1984) - see column 9	4, 7, 15, 16
Y	US 4,133,240 (VOLLMER ET AL) 09 January 1979 (09.01.1979) - see column 3	5, 6
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