

Title (en)
COMPOSITE UTILITY BLADE, AND METHOD OF MAKING SUCH A BLADE

Title (de)
VERBUND-ALLZWECKMESSER UND VERFAHREN ZUR HERSTELLUNG EINES SOLCHEN MESSERS

Title (fr)
LAME UTILITAIRE COMPOSITE ET SON PROCEDE DE FABRICATION

Publication
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Application
EP 04717441 A 20040304

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Abstract (en)
[origin: WO2004078424A2] A composite utility blade and method of making such a blade involves butt joining a high speed or tool steel wire to a front edge of an alloy steel backing strip. The wire defines a predetermined cross-sectional shape that substantially corresponds to the cross-sectional shape of the cutting edge of the blade. The wire is electron beam welded to the backing strip to form a composite strip defining a first metal portion formed by the alloy steel backing strip, a second metal portion formed by the high speed or tool steel wire, and a weld region joining the first and second metal portions. The composite strip is then annealed, and the annealed strip is straightened to eliminate any camber therein. The annealed composite strip is then hardened such that the first metal portion defines a first surface hardness and the second metal portion defines a second surface hardness greater than the first surface hardness. The hardened strip is then subjected to tempering and quenching cycles, and facets are formed on the edge of the second metal portion to form a straight, tool steel cutting edge. The composite strip is then scored at axially spaced locations to form a plurality of score lines, and the plurality of score lines define a plurality of blade sections there between. The cutting edge may be coated with AlTiN, TiN, or an inner coating of AlTiN and an outer coating of TiN.

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IPC 8 full level
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