

Title (en)  
STRUCTURAL BUILDING ELEMENT

Title (de)  
BAUTEIL

Title (fr)  
Élément de construction

Publication  
**EP 1579091 A1 20050928 (EN)**

Application  
**EP 03778579 A 20031203**

Priority  
• GB 0305257 W 20031203  
• GB 0228171 A 20021203

Abstract (en)  
[origin: WO2004051024A1] The invention provides a structural building element (1) formed from cold-rolled lightweight sheet steel. The building element (1) may be used as a structural upright or as a beam, and is based generally on building elements with a known C-shaped profile. The profile of the building element of the invention is however based on a continuous curve. Each of a pair of front wall portions (2a) and (2b) extends in a wholly or substantially smooth arc from a central slot opening (5) onto the corresponding lateral side (3a, 3b). The rear portion (4) is sinusoidal, comprising a pair of convex wall portions each extending in a wholly or substantially smooth arc from a concave arcuate or substantially arcuate rear central wall portion (7) onto a respective one of the lateral sides (3a, 3b).

IPC 1-7  
**E04C 3/07; E04B 1/58**

IPC 8 full level  
**E04C 3/07** (2006.01); **E04C 3/09** (2006.01); **E04B 1/58** (2006.01); **E04C 3/04** (2006.01)

CPC (source: EP US)  
**E04C 3/07** (2013.01 - EP US); **E04C 3/09** (2013.01 - EP US); **E04B 2001/5875** (2013.01 - EP US); **E04C 2003/0413** (2013.01 - EP US);  
**E04C 2003/0421** (2013.01 - EP US); **E04C 2003/043** (2013.01 - EP US); **E04C 2003/0434** (2013.01 - EP US);  
**E04C 2003/0447** (2013.01 - EP US); **E04C 2003/0452** (2013.01 - EP US); **E04C 2003/0473** (2013.01 - EP US);  
**E04C 2003/0495** (2013.01 - EP US)

Citation (search report)  
See references of WO 2004051024A1

Citation (examination)  
AU 545892 B2 19850808 - BROWNBUILT LTD

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)  
**WO 2004051024 A1 20040617**; AU 2003285580 A1 20040623; CA 2508369 A1 20040617; CN 1735736 A 20060215; EP 1579091 A1 20050928;  
GB 0228171 D0 20030108; JP 2006509125 A 20060316; JP 4425144 B2 20100303; NZ 541030 A 20080328; US 2006137284 A1 20060629;  
ZA 200505333 B 20060426

DOCDB simple family (application)  
**GB 0305257 W 20031203**; AU 2003285580 A 20031203; CA 2508369 A 20031203; CN 200380108564 A 20031203; EP 03778579 A 20031203;  
GB 0228171 A 20021203; JP 2004556528 A 20031203; NZ 54103003 A 20031203; US 53793205 A 20051103; ZA 200505333 A 20050701