

Title (en)  
INTEGRATED PLATE WELDED-JOINT-FREE VEHICLE WHEEL AND FORMING METHOD THEREOF

Title (de)  
SCHWEISSVERBINDUNGSFREIES FAHRZEUGRAD MIT INTEGRIERTER PLATTE UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)  
ROUE DE VÉHICULE SANS ASSEMBLAGE SOUDÉ À PLAQUE INTÉGRÉE ET SON PROCÉDÉ DE FORMAGE

Publication  
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Application  
**EP 15834272 A 20150106**

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Abstract (en)  
The present invention provides forming methods of one-piece weldless wheels made of metal sheets including the steps of rolling, forming a primary wheel rim and a primary wheel disc, roll forming, compressing and shaping, in order to obtain one-piece weldless wheels made of metal sheets. The forming methods of one-piece weldless wheels made of metal sheets of the present invention can form weldless wheels made of metal sheets by rolling, cold roll forming and cold extruding, which can reduce energy consumption by 45-55% and cut down material cost by 5-15% while improve strength of the wheel by 20-30%. A wheel with different thicknesses (The thicknesses of various sections of the wheel are different.) can be formed by the methods of the present invention and such wheel can meet the requirements on mechanical strength. Besides, the methods also can significantly improve the precision of the wheel and reduce the swing value and jerk value to the minimum. Additionally, the wheel produced by the methods of the present invention is safer, and the regular air tight test on the wheel is not necessary. Moreover, the present invention also provides one-piece weldless wheels made of metal sheets which are manufactured by the methods of one-piece weldless wheels made of metal sheets.

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Citation (third parties)  
Third party : anonymous  
• EP 2460603 A1 20120606 - SHANGHAI XINGPU SPINFORMING WHEEL CO LTD [CN]  
• US 3270402 A 19660906 - EDWARD ADAMS GEORGE, et al

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