

Title (en)  
METHOD AND DEVICE FOR ROLLING- IN OF TUBES

Publication  
**EP 0212166 B1 19891220 (DE)**

Application  
**EP 86109001 A 19860702**

Priority  
DE 3528967 A 19850813

Abstract (en)  
[origin: US4730473A] A method and apparatus for rolling tubes into tube plates, especially heat exchangers, with a tube roller. Prior to the rolling process, the desired holding expansion value is set, and during the rolling process the holding expansion is measured. When the preset expansion value is reached, the expansion is discontinued. The magnitude of the holding expansion is determined by ultrasonically measuring the changing thickness of the wall of the tube during the expansion. The apparatus includes a tube roller that is operated by a drive mechanism. Also provided is a roll controller that can be set to the desired holding expansion value. An ultrasonic measuring head is provided in the tube roller, and is connected with the roll controller.

IPC 1-7  
**B21D 39/06**

IPC 8 full level  
**B21D 39/06** (2006.01); **B21D 39/10** (2006.01)

CPC (source: EP US)  
**B21D 39/06** (2013.01 - EP US); **B21D 39/10** (2013.01 - EP US)

Citation (examination)  
• "Stahl und Eisen" 53. JAHRGANG, HEFT 47, 23.NOV. 1933, SIEBEL 'WALZVERBINDUNGEN', S. 1205 bis 1215  
• "CHEM.ING.-TECHNIK", 23.JAHRGANG, NR 17/18, 1951, DUNKER, "FESTIGKEIT VON ROHREINWALZUNGEN IN ROHRBÖDEN", S. 433 bis 437

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**DE 3528967 C1 19870115**; DE 3667619 D1 19900125; EP 0212166 A2 19870304; EP 0212166 A3 19870527; EP 0212166 B1 19891220; JP S6297731 A 19870507; US 4730473 A 19880315

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