

Title (en)

Method for lapping, grinding, honing and polishing seal surfaces on inner diameter of semi-blind cavity in valve body

Title (de)

Verfahren zum Läppen, Schleifen, Honen und Polieren von Dichtungsflächen auf einem Innendurchmesser von Teilblindbohrungen in einem Ventilkörper

Title (fr)

Procédé de rodage, affilage, pierrage et polissage de surfaces d'étanchéisation sur un diamètre interne de cavité semi-aveugle dans le corps d' une vanne

Publication

**EP 2184131 A1 20100512 (EN)**

Application

**EP 09175571 A 20091110**

Priority

- US 11332608 P 20081111
- US 57839809 A 20091013

Abstract (en)

A tool assembly (61) for lapping, grinding, honing and polishing seal surfaces (50) on inner diameters of semi-blind cavities (36) in valve bodies (22). The tool (61) can bring seat surfaces (50) up to specification with abrasive wheels (63) having varying grit sizes. The wheels (63) are provided in an array of sizes to form a set of tools (61) for a range of diameters, abrasion and surface finish capacity. This design allows the first (i.e., smallest) tool (61) to enter a cavity (36) in a valve body (22) to begin cutting. The larger size wheels (63) increase the diameter of the cavity (36) being machined until the desired size is achieved. Wheels (63) with finer abrasive are then used to improve the surface finish of the cavity (36) while minimizing the material removal. When the desired diameter and/or surface finish has been achieved, a felt wheel may be used with a fine abrasive paste to provide the cavity (36) with the final surface finish specification.

IPC 8 full level

**B24B 5/06** (2006.01); **B24B 15/02** (2006.01); **B24B 33/02** (2006.01); **B24B 37/04** (2012.01)

CPC (source: EP US)

**B24B 5/06** (2013.01 - EP US); **B24B 15/02** (2013.01 - EP US); **B24B 33/025** (2013.01 - EP US); **B24B 37/042** (2013.01 - EP US); **Y10T 29/49409** (2015.01 - EP US)

Citation (applicant)

US 2636325 A 19530428 - LIVINGSTON FRANCIS G, et al

Citation (search report)

- [XY] US 2636325 A 19530428 - LIVINGSTON FRANCIS G, et al
- [Y] US 2203143 A 19400604 - HAAS SAMUEL H
- [A] GB 480553 A 19380224 - BABCOCK & WILCOX LTD, et al
- [A] US 2908120 A 19591013 - JENSEN EIVIND H
- [A] US 2360550 A 19441017 - CROCKER CULP LIDE
- [A] US 2351124 A 19440613 - HENDRICK JOHN C

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)

**EP 2184131 A1 20100512**; BR PI0904830 A2 20130702; US 2010115772 A1 20100513

DOCDB simple family (application)

**EP 09175571 A 20091110**; BR PI0904830 A 20091111; US 57839809 A 20091013