

## Title (en)

Vessel for casting a molten metal and prefabricated sleeve for fixing the casting tube in such a vessel

## Title (de)

Gefäß zum Giessen einer Metallschmelze und vorgefertigter Muffenkörper zur Befestigung eines Giessrohres in solchen Behälter

## Title (fr)

Récipient de coulée de métal liquide et manchon préfabriqué de fixation de la busette dans un tel récipient

## Publication

**EP 0703027 A1 19960327 (FR)**

## Application

**EP 95402010 A 19950905**

## Priority

- FR 9410619 A 19940905
- US 81192997 A 19970305

## Abstract (en)

A vessel for containing molten metal has a permanent ceramic lining (3) penetrated in the floor region by at least one frusto-conical opening (6) designed to receive the upper rim (8) of a pouring nozzle (7). An annular sleeve (11) is sandwiched between rim (8) and the wall of opening (6). The sleeve comprises compacted particles which will not significantly sinter together at the molten metal temperature so that the sleeve remains frangible after use, facilitating removal of a clogged nozzle prior to its replacement by a new one. Opening (6) is formed directly in lining (3) or in a brick (5) which forms a continuation thereof. The sleeve wall thickness may be 1-40 mm, and the upper edge of the sleeve may be separated from the molten metal by a refractory cement seal (12). Sleeve (11) may be preformed of particles bonded by an agent which will be decomposed by the heat of molten metal, or the sleeve is formed in situ by pouring material into the gap between rim (8) and opening (9). The sleeve may comprise mineral and organic bonding agents, granular refractory material such as sand or graphite, organic and/or mineral fibres and lubricant. An exemplified mix comprises 68.32% MgO and 19.22% SiO<sub>2</sub> with smaller proportions of Cr<sub>2</sub>O<sub>3</sub>, Al<sub>2</sub>O<sub>3</sub>, CaO, Fe<sub>2</sub>O<sub>3</sub>, Na<sub>2</sub>O, H<sub>2</sub>O and C, and exhibits a 4.81% weight loss when fired at 1000 degrees C.

## Abstract (fr)

Le récipient de coulée de métal liquide tel qu'une poche de coulée ou tel qu'un répartiteur de coulée continue comprend un fond (2) comportant au moins un orifice de coulée (4) traversant le revêtement permanent (3). Un espace annulaire est ménagé entre le trou (6) du revêtement permanent et le pourtour (8) de la busette (7). Cet espace annulaire est rempli par un manchon préfabriqué (11) constitué de particules inorganiques maintenues par un liant présentant un taux de dégradation prédéterminé aux températures en jeu pendant la coulée dudit métal liquide. <IMAGE>

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## IPC 8 full level

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## Citation (applicant)

FR 2119057 A1 19720804 - INTERSTOP AG

## Citation (search report)

- [Y] FR 2119057 A1 19720804 - INTERSTOP AG
- [X] FR 2396610 A1 19790202 - DAISHIN KAKO CO LTD [JP]
- [A] US 3735906 A 19730529 - ZETTLEMPOYER J E, et al
- [Y] PATENT ABSTRACTS OF JAPAN vol. 12, no. 419 (M - 760)<3266> 8 November 1988 (1988-11-08)
- [A] PATENT ABSTRACTS OF JAPAN vol. 6, no. 61 (M - 123)<939> 20 April 1982 (1982-04-20)

## Cited by

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## Designated contracting state (EPC)

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**EP 0703027 A1 19960327**; **EP 0703027 B1 19980401**; DE 69501932 D1 19980507; DE 69501932 T2 19981126; FR 2724128 A1 19960308; FR 2724128 B1 19970207; US 5858260 A 19990112

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