

Title (en)
Static mixers.

Title (de)
Statischer Mischer.

Title (fr)
Mélangeur statique.

Publication
EP 0071454 A1 19830209 (EN)

Application
EP 82303951 A 19820727

Priority
CA 382702 A 19810728

Abstract (en)
A static mixer comprises a conduit for transporting flowable material, and a plurality of stationary mixer elements which so deflect the flow of material that a thorough mixing is effected. Each mixer element comprises seven plate members: a diamond-shaped plate (34); two triangular plates (48,50), co-planar and perpendicular to the diamond-shaped plate, the base of one triangular plate providing a leading edge to divide material flow into the conduit into two separate flows; and four deflector plates (66,68,70,72), which join the diamond-shaped and triangular plates and conform to the contours of inner walls of the conduit to provide two separate flow paths. The flow paths are substantially helical and rotate through substantially 180 degrees from the leading edge to trailing edge of each mixer element to rotate and thoroughly mix individual flows through the element. The leading edge of each succeeding mixer element is angled relative to the trailing edge of the immediately preceding mixer element to obtain successive division, mixing and recombination of flows.

IPC 1-7
B01F 5/06

IPC 8 full level
B01F 5/06 (2006.01)

CPC (source: EP)
B01F 25/43151 (2022.01)

Citation (search report)

- [AD] US 3643927 A 19720222 - CROUCH ROSS A
- [AD] US 3923288 A 19751202 - KING LEONARD TONY
- [AD] US 4034965 A 19770712 - KING LEONARD TONY
- [AD] US 4179222 A 19791218 - FINCH GEORGE W [US], et al
- [AD] US 4208136 A 19800617 - KING LEONARD T [US]

Cited by
DE19700462C2; US5650173A; US6136272A; CN110869111A; DE19748383C2; US5654008A; US5688801A; US5770231A; US5965168A; US6110921A; WO2011025725A1; US7946753B2; US7645843B2; US8293185B2; EP3241611A1; WO2017191054A1; US10946357B2; US6368632B1; US6544559B2; US6803055B2; US7118763B2; WO2017220425A1; US7547452B2; EP3548829B1

Designated contracting state (EPC)
AT BE CH DE FR GB LI NL SE

DOCDB simple family (publication)
EP 0071454 A1 19830209; EP 0071454 B1 19861217; AT E24283 T1 19870115; DE 3274720 D1 19870129

DOCDB simple family (application)
EP 82303951 A 19820727; AT 82303951 T 19820727; DE 3274720 T 19820727