PRODUCT DATASHEET

Nickel-Alloy Caustic-Fusion Reactor

Nickel reactors for castor-oil fusion to sebacic acid and 2-octanol

Product page





Close-up: agitator drive and vent condenser

OVERVIEW

The Tech Inc. Nickel-Alloy Caustic-Fusion Reactor fuses castor oil or ricinoleic acid with hot caustic soda to make sebacic acid salts and 2-octanol.

TYPICAL DESIGN DATA

Wetted materials	Nickel 200 below about 315 °C, Nickel 201 above it; Alloy 600 or 625 parts where the duty allows
Temperature	Up to about 320 °C
Pressure	Atmospheric to about 6 barg, with full vacuum rating on request
Heating	Thermal oil in a half-pipe jacket, or electric zones
Agitation	Anchor or gate agitator sized for the viscous melt
Design code	ASME VIII Div. 1 or as specified

MODELS AND CAPACITIES

- **TI-CFU-100** – about 100 L, pilot
- **TI-CFU-3000** – about 3 m³
- **TI-CFU-10000** – about 10 m³
- **TI-CFU-1000** – about 1 m³
- **TI-CFU-6000** – about 6 m³

Indicative working volumes per batch.

ORDERING CODE

Example **TI-CFU-3000-L-T**: **3000** working volume, L; **L** material: N Nickel 200, L Nickel 201; **T** heating: T thermal oil, E electric.

SCOPE OF SUPPLY

Included: factory acceptance test with a written report; drawings for approval, material certificates and manual. **Options:** pilot reactor for process trials; thermal-oil heating and cooling unit; PLC with batch recipes and data logging.

KEY ADVANTAGES

- **Right metal** – Nickel 200 and 201 for hot caustic
- **Even heating** – thermal-oil jacket or zoned heaters
- **Safe venting** – hydrogen vent with flame arrestor
- **By-product recovery** – condenser and receiver for 2-octanol

Designed and built by Tech Inc. · **Part of the Davey Group since 1990**

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