

ECLA EUROPEAN CLASSIFICATION

F42D

BLASTING (fuses, e.g. fuse cords, [C06C5/00](#); [N: for obtaining fluid from wells [E21B43/00](#); for mining or quarrying [E21C37/00](#); for making tunnels or galleries [E21D9/00F](#)]; cartridges [F42B3/00](#))

[N: **WARNING**

[N9601]The following IPC groups are not used in the internal ECLA classification scheme. Subject matter covered by these groups is classified in the following ECLA groups:

[F42D7/00](#) covered by [F42D1/00](#), [F42D3/00](#)
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F42D1/00

Blasting methods or apparatus, e.g. loading or tamping

- F42D1/02 . Arranging blasting cartridges to form an assembly (adaptation of blasting cartridges therefor [F42B3/02](#))
- F42D1/04 . Arrangements for ignition [N: (ignition systems for shaped charge perforators [E21B43/1185](#); ignition devices for seismic energy generators [G01V1/06](#))]
- F42D1/04C . . [N: Tools for adapting cartridges for the mounting of detonators (Cartridges specially adapted for the mounting of detonators [F42B3/26](#))]
- F42D1/04D . . [N: Logic explosive circuits, e.g. with explosive diodes] [C9608]
- F42D1/04F . . [N: Connectors for detonating cords and ignition tubes, e.g. Nonel tubes (mounting of detonators in blasting cartridges [F42B3/26](#))] [N9608]
- F42D1/045 . . Arrangements for electric ignition (dynamo-electric generators [H02K](#))
- F42D1/05 . . . Electric circuits for blasting
- F42D1/055 specially adapted for firing multiple charges with a time delay
- F42D1/06 . . Relative timing of multiple charges ([N: [F42D1/04F](#) and] [F42D1/055](#) take precedence) [C9608]
- F42D1/08 . Tamping methods; Methods for loading boreholes with explosives; Apparatus therefor
- F42D1/10 . . Feeding explosives in granular or slurry form; Feeding explosives by pneumatic or hydraulic pressure
- F42D1/12 . . Feeding tamping material by pneumatic or hydraulic pressure
- F42D1/14 . . Hand-operated tamping or loading
- F42D1/16 . . . Tamping tools
- F42D1/18 . . Plugs for boreholes
- F42D1/20 . . Tamping cartridges, i.e. cartridges containing tamping material (flexible or deformable blasting cartridges [F42B3/087](#))
- F42D1/22 . . Methods for holding or positioning for blasting cartridges or tamping cartridges
- F42D1/24 . . characterised by the tamping material
- F42D1/26 . . . Tamping with foaming agents
- F42D1/28 . . . Tamping with gelling agents

F42D3/00

Particular applications of blasting techniques [N: explosive welding [B23K20/08](#); explosive bolts or actuators [F42B3/00D](#); explosive valves [F16K13/06](#); cutting devices actuated by explosion [B23D15/14B](#); pyrotechnical actuators [F15B15/19](#); switching

devices actuated by explosion [H01H39/00](#)

F42D3/02 . for demolition of tall structures, e.g. chimney stacks

F42D3/04 . for rock blasting

F42D3/06 . for seismic purposes

F42D5/00 Safety arrangements

F42D5/02 . Locating undetonated charges

F42D5/04 . Rendering explosive charges harmless, e.g. destroying ammunition ([N: [F42B39/14](#) and [F42B39/20](#) take precedence]; extracting primers, dismantling ammunition [F42B33/04](#), [F42B33/06](#); [N: chemical deactivating of explosives [C06B21/00F](#)]); Rendering detonation of explosive charges harmless

F42D5/045 . . Detonation-wave absorbing or damping means

F42D5/05 . . . Blasting mats

F42D5/055 . . Silencing means for blasting operations

F42D5/06 . Unloading boreholes

F42D99/00 Subject matter not provided for in other groups in this subclass [\[N0901\]](#)