## POLITECNICA UNIVERSITY OF MADRID MINISTRY OF EDUCATION AND SCIENCE, MINISTRY OF INDUSTRY, TRADE AND TOURISM J. M. MADARIAGA OFFICIAL LABORATORY

## (REAL DECREE 334/1992, OF 3 APRIL – BOE (OFFICIAL SPANISH GAZETTE) 29-04-92) EXPLOSIVES FOR CIVIL USE

(Directive 93/15/EEC)

1	"CF"	STANI	DARD	CERTIFIC	'ATF

- 2. LOM CE/Ep 97.2027
- 3. This certificate is issued for:

Instantaneous HI RIODET Electric Detonator.

4. For a model manufactured and submitted for certification by:

UNION EXPLOSIVOS-ENSING BICKFORD SISTEMAS DE INICIACION (UEB) Barrio Zuazo, s/n 48960 Galdácano (Vizcaya)

- 5. This product, along with any accepted different variants, is specified in the annex to this certificate and in the descriptive documents cited therein.
- 6. The J. M. Madariaga OFFICIAL LABORATORY (LOM), Notified Body No. 0163, pursuant to Article 6-2 of the European Communities Council Directive 93/15/EEC, of 5 April 1993, HEREBY CERTIFIES:
  - That this product complies with the Essential Safety Requirements, established in Annex I of Directive 93/15/EEC of 5 April 1993.
- 7. The results of the inspections and testing are set out in confidential protocol: LOM 95.281 RP

Madrid, 10 June 1997

THE OFFICIAL

Approved by:

Signature of: Carlos Fernández Ramón LABORATORY DIRECTOR Signature of: Francisco Rodríguez García

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# POLITECNICA UNIVERSITY OF MADRID MINISTRY OF EDUCATION AND SCIENCE, MINISTRY OF INDUSTRY, TRADE AND TOURISM J. M. MADARIAGA OFFICIAL LABORATORY

### (REAL DECREE 334/1992, OF 3 APRIL – BOE (OFFICIAL SPANISH GAZETTE) 29-04-92) ANNEX

LOM CE/Ep 97.2027

#### (A1) PRODUCT NAME:

Instantaneous HI RIODET Electric Detonator.

#### (A2) PRODUCT DESCRIPTION

Electric detonator

Type as per UNE 31360 HI

Class: Instantaneous Casing: Aluminium

Leading wires: Copper 0.6 and 0.8 mm Ø

Wire insulation: PVC
Firing current in series: 25 A
Firing current: 25 A

Firing impulse:  $1100 \div 2500 \text{ mJ/}\Omega$ Bridge resistance:  $0.03 \div 0.05 \Omega$ 

#### (A3) SUBMITTED DOCUMENTS:

- a) Descriptive documents:
- General Description of the Product dated 1995-09-27
- Product characteristics of 1995-07-27
- Descriptive report of 1995-07-27
- Drawings: 6-0777/L Rev. 1 dated 1994-01-19 6-0781/L Rev. 2 dated 1994-01-20 6-0853/L Rev. 1 dated 1995-02-20 6-0854/L Rev. 3 dated 1995-02-20 6-1204-L dated 1996-02-14 P.L.I. 6-0866/L dated 1994-06-22 Rev. 1 dated 1993-05-04 6-0908/L 6-0909/L Rev. 1 dated 1993-05-04 6-0995/L Rev. 2 dated 1994-11-25 Rev. 2 dated 1994-04-20 6-1100/L
- b) Additional documents:
  - Use of Explosives Manual of July 1994

6-1177/L

Technical recommendations for handling and using electric detonators

dated 1995-10-31

#### (A6) SPECIFIC CONDITIONS

Safety current: 4 A

### (A7) MARKING OF THE CERTIFIED MATERIAL:

The marking shall include:

- RIODET HI Instantaneous
- Manufacturing date

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