4. INDIVIDUAL PROOF OF WEAPONS

4.1. STANDARD REGULATIONS FOR THE CARRYING OUT OF INDIVIDUAL PROOFS OF BREECH LOADING WEAPONS [XVII-11]

Article 1 Principle.

1.1. The purpose of this decision is to lay down the minimum uniform requirements for the individual proofing of breechloading firearms.
These requirements are also applicable to the highly-stressed components which may be assembled into a firearm without the need for fitting. In this case, the complete firearm need not be re-proofed if the highly-stressed components whose assembly requires fitting operations to be performed shall be re-proofed after assembly.
The expressions highly-stressed components denotes components, of whatever type, which must be capable of withstanding the gas pressure, i.e. the barrels, the cartridge chambers which are not part of the barrel, and the locking mechanisms.
The expression fitting denotes any operation performed on the component itself which is likely to reduce its strength and which, in consequence, will involve re-proofing in accordance with the requirements of the C.I.P.

1.2. Firearms testing was conducted in the laboratories of the national Proof Houses of C.I.P. Member States.

1.3. The test can be conducted by a service outside of an established national Proof House at the manufacturer, so long as the production is situated in a C.I.P. Member State, that the manufacturer presented a request for it and that the manufacturer and national Proof House have agreed upon the following points:

- The manufacturer must put in place and maintain an ISO 9001 or equivalent quality management system.
- Impartial personnel, employed by the national Proof House and qualified for the final inspection of firearms are delegated to the manufacturer's facilities.
- The manufacturer's personnel are put at the disposal of the national Proof House. The personnel must be qualified and be of sufficient quantity.
- The Proof House personnel are authorised to give instructions to the manufacturer's personnel made available.
- The test activity at the manufacturer is regularly audited by the national Proof House (routinely, at least once per year). This includes the inspection of facilities, personnel competence, mastery of procedures, measurement systems, etc…
- Any change concerning tests by the manufacturer (personnel, facilities, equipment, procedures) requires the prior agreement of the director of the national Proof House.
- All the inspections and test shots must be carried out under the supervision of the staff of the national Proof House. Test cartridges must be inspected by the national Proof House, according to the C.I.P. regulations in effect. The national Proof House must have total control of the measurement instruments and equipment defined by the C.I.P.

- The final visual inspection after the test shots, the verification and if necessary, the application of firearms markings are conducted at 100% by the personnel of the national Proof House in a location dedicated for this purpose.

- The personnel of the national Proof House must mark the rejected firearms.

1.4. The proof marks may not be applied until the firearm, or the highly-stressed components of a firearm, have been proofed in accordance with the provisions stipulated blow and have met the requirements laid down.

1.5. The C.I.P. recognises that the properties of the material used and the resulting wall thickness of the barrel and the chamber represent major safety factors. Nevertheless, the C.I.P. feels that this matter is, in fact the responsibility of the manufacturer.

Article 2 Procedure.

Proofing shall include:

- a check prior to firing;
- the proof firing;
- an inspection after firing.

Article 3 Check prior to firing.

Firearms shall be subjected to an inspection before undergoing the proof firing.
This inspection shall consist of:

- a check on the distinguishing marks;
- a check of the operating safety and a visual inspection;
- a check of the dimensions.

Article 4 Check on the distinguishing marks. [XXXII-47]

At the time of verifying distinctive markings, one will verify if the following indications have been affixed in a visible and durable fashion on at least one of the strongly reinforced parts of the weapon:

- the name, corporate name, or registered trademark of the manufacturer or any other indication allowing the identification of the weapon;
- the country or location of manufacture;
- the serial identification number of the weapon, as well as the year of manufacture (if it does not appear in the serial identification number of the weapon);
- the designation of the calibre according to the TDCC naming convention (for example 7 x 64, 243 Win, 12-70, etc.) on each of the barrels if the weapon has barrels of different calibres, or on one of the barrels if they are of the same calibre;
- in the case where the cylinder of a revolver is interchangeable, the designation of the calibre on each cylinder;
- where applicable, the indication “shot weapon“.

The Recommendation relating to Decision XXXI-48 is maintained :

If the year of manufacture is not indicated on the portable firearm, or if the year of manufacture cannot be determined, the Proof House shall mark it with the year it was presented for proofing.

Article 5 Check on operating safety and visual inspection.

5.1. The check on operating safety shall include the correct operation of the loading mechanism of semi-automatic firearms, of the locking mechanism, of the breech, of the safety catch, and of the cocking and percussion device.

5.2. The visual inspection involves looking for any faults in the material, any strength faults and any defective welding in highly-stressed components, and also any possible deformation of the barrel and the chamber.

5.3 For dust shot weapons, the visual inspection and check revolves around the specific nature of these weapons.
Dust shot weapons are defined as short weapons only capable of firing cartridges with projectiles made of metallic shot having a diameter of less than 2 mm. [XXIII-7]

5.4. If, during the course of proof of dust shot weapons, there is evidence of functional irregularities, then safety of functioning will be checked by firing 5 commercial dust shot cartridges through those weapons with single chamber, and 2 commercial dust shot cartridges from each revolver cylinder chamber.
A check will be made that the weapon functioning is normal and regular and that the barrel is not blocked. If there is evidence of a barrel obstruction, the barrel will be cleaned thoroughly for a re-proof, which is allowed using double the number of commercial dust shot cartridges. On completion of this latter proof there must be no trace of defects. [XXIII-7]

Article 6 Check of the dimensions.

These checks relate to the dimensions listed in the Annex. (4.2.)
Where a firearm whose internal barrel and chamber dimensions are not yet listed in the C.I.P. Tables is submitted for proof at a Proof House, the latter may carry out dimensional checks on the basis of detailed information supplied by the manufacturer. [XXI-12.1]

Article 7 Rejection before firing

Any firearms and highly-stressed components which have been found to exhibit one of the faults listed below in the course of the check prior to firing, shall be rejected and returned to the applicant:

7.1. absence of distinguishing marks in accordance with Article 4;

7.2. faults produced by incorrect forging, hammering, drilling, or welding, turning or milling operations, or by other machining operations if these have an adverse effect on the function and strength, such as:

a. forging folds;
b. cracking in the material, veining, breaks of continuity in the material or faulty welding;
c. poor fitting or poor welding of the barrels, the hooks, or ribs and the sliding fastener,
d. score-marks or other irregularities caused by the machining of the interior wall of the chamber and barrel, resulting in inadequate polishing clearly visible to the naked eye, making it more difficult to identify faults caused by the proof firing.
e. The acceptable limit value for Ra is 1,8 μ for the chamber and 1 μ for the barrel. (to be checked only in the event of a dispute).
f. If any of the irregularities referred to above are observed, and if they are not corrected by the applicant, then the Proof House shall use three times the specified number of proof cartridges;
g. pockets on the inside of the barrel and chamber;
h. phenomena similar to the bulging which appears in particular at the cones between the chamber and the barrel and at the choke, especially those which cause a reduction in the strength of the walls;

7.3. depressions, folds or ripples visible to the naked eye on the inside of the barrel;

7.4. inadequate construction of the locking mechanism of the firearms, such that faultless operation cannot be guaranteed during cocking and locking;

7.5. absence of operating safety; in this respect, the following checks must be made:

a. the easy operation of the locking mechanism and the safety locking device;
b. the correct operation of the loading and ejection mechanism of semi-automatic firearms;
c. the totally reliable operation of the safety catch;
d. the absence of the risk of firing during loading;
e. the free movement of the firing pins in their guides; the firing pins must not project beyond the abutment after cocking; there must be no burr present in the firing pin hole and at its head;
f. the correct operation of the trigger mechanism (the release may not be too light, except in the case of special competition firearms);
g. the reliable operation of the cylinder of revolvers;

7.6. dimensions other than those stipulated in C.I.P. Standards:

if smooth-bore firearms with a barrel bore diameter B exceeding the maximum permitted value are submitted for proof, they may be accepted provided that the calibre and corresponding length of the chamber and also the calibre corresponding to the bore diameter or the bore diameter for the calibre in question are engraved on the barrel (e.g. 12/76 calibre or 12/76 - 19.3.).

Moreover, the bore diameter B may in no circumstances be less than the minimum set for the calibre of the chamber; [XXI-12.2]

Weapons with a rifling profile (polygonal barrel) which departs from conven-tional grooves and lands may be accepted if the cross sectional area of the barrel is no more than 0.7% less than the value Q given in CIP Tables.

The use of cartridges loaded with solid projectiles having a core hardness figure greater than that of lead is not allowed in weapons with barrels having polygonal rifling. The basic packaging must be marked to show that such cartridges may not be fired through barrels with polygonal rifling. This may also be written in the language of a CIP Member State.

This ban need not be applied if an applicant provides demonstrable data to the proof house that the pressure of the cartridges in the weapons with polygonal rifling haing a cross sectional area of the barrel bore 0.7% less than the value Q given in the CIP Tables, remains with the limits given in the Tables. [XXIX-41]

7.7. corrosion and stains. A used firearm may, however, be accepted, but must be subjected to triple proofing;

7.8. for rimfire revolvers: absence of a rim recess in the revolver chamber. [XXIII-11]

Article 8 Proof firing

8.1. The proof firing shall be performed on finished firearms or on finished highly-stressed components. Firearms which require further burnishing and/or engraving, with due allowance for the provisions of Paragraph 11.1 (firearms finished in a blank state), shall be regarded as finished firearms. If the assembly of a firearm involved the fitting of highly-stressed components which had already been subjected to proofing, then the complete firearm shall also be subjected to proofing. In the case of firearms with more than one barrel, each barrel shall be subjected to proofing; in the case of revolvers, each chamber of the cylinder.

8.2. The proof firing shall be conducted in accordance with the requirements of the C.I.P. which are valid at the time.

8.3. If there are grounds to believe that the proof cartridge was faulty, then the Proof House must fire an additional round, over and above the stipulated number of rounds.

Article 9 Inspection after firing

After the proof firing, the firearms or highly-stressed components shall undergo a further inspection. The provisions of Article 5 shall apply to this inspection.

Article 10 Rejection after firing

10.1 Any firearms and highly-stressed components which have been visibly deteriorated by the proof firing, as well as any firearms in which inspection has revealed one of the faults listed below, shall be rejected and returned to the applicant:

a. failure to fire
b. unexpected discharge of the round on closing the firearms;
c. unexpected discharge of a number of cartridges in firearms with more than one barrel, even when commercial ammunition is used;
d. hard extraction of cartridge cases caused by abnormal deformation of the case. This hard extraction is to be checked using cartridges developing a mean pressure equal to Pmax. [XXVI-4];
e. perforation of the primer, even when commercial ammunition is used;
f. any deformation of the barrel and chamber likely to impair the safety of the firearms;
g. any dilation of the barrel, including dilation in the form of undulations at the weakest points of barrel;
h. failure of welding of ribs or hooks;
i. permanent separation of the locking mechanism in excess of the maximum value stipulated by the C.I.P.;
j. deterioration or deformation of essential components of the locking mechanism;

k. cracking on the inside and on the outside of the barrel and chamber, and on other essential components of the firearm;
l. operating mechanism clearly defective or not safe (safety and firing mechanisms; trigger, loading and ejection mechanisms, locking mechanism, and cylinder rotating device) or ineffective safety catch;
m. Non concentricity of the barrel bore with the cylinder chamber of the revolver.[XXVI-4]

10.2. In the event of the result of the proof firing giving rise to the slightest doubt as to the strength of a firearm or of one of its highly-stressed components,
or if there are grounds to suspect the presence of deterioration or of a fault (as specified in Paragraph 1),
or if a fault is observed in a cartridge case from a proof round, the Proof House must carry out as additional firing of proof rounds over and above the stipulated number of rounds. Commercial ammunition shall be used if there are reasons to suspect a functional defect.

10.3. Any firearms and highly-stressed components which are excluded from the proof firing in accordance with the provisions of Article 7, or which are rejected in accordance with the provisions of Article 10, are marked with a proof mark identifying the Proof House. They may be resubmitted to the same Proof House if the applicant can show that any faults noted have been remedied.

The proofing shall then be repeated. [XXIII-10]

Article 11 Re-proofing

11.1. If a firearm which has already been proofed or a highly-stressed component which has already been proofed has undergone one of the following operations, which is likely to have impaired the safety of the firearm, then that firearm or component shall be subjected to further proofing in accordance with Articles 3 to 9:
- replacement of a highly-stressed component, requiring fitting,
- any modification of the dimensions,
- any deterioration in the strength of the materials.

11.2. In the event of a firearm or lightly-stressed component which has been proved in accordance with paragraphs 11.1 and 10.3 revealing one of the faults listed in Article 10, any proof mark appearing on the firearm or on the highly-stressed component shall be obliterated by means f an 'X' applied over or alongside the proof mark.

Article 12 Application of proof marks

12.1. In those cases where the proof and the inspections and checks compliant with paragraphs 3 to 9 and 11 fail to disclose any defects, the proof marks are to be applied visibly and clearly on all highly stressed items that have been subjected to proof:

- for all weapons except revolvers:
- on each barrel and essential component of the locking mechanism (action body for hinged weapons, bolt for others) and on the frame or housing if there is one;
- for revolvers:
- on the barrel, cylinder drum, and frame;
- for weapons where the chamber is not integral with the barrel bore:
- on the barrel, each chamber and the essential components of the locking mechanism. [XXVIII-63]

No later than 20 October 2014 for the proof marks affixed to firearms and devices and no later than 20 October 2016 for the munitions control symbol, all Member States will be required to affix the following unique C.I.P. proof marks:

Ordinary test	CIP N
Superior test	CIP S
Black powder test	CIP PN
“Steel shot” test	CIP
Approval marking	CIP T
Ammunition control marking	CIP M

Under the national law of the Member States, the products manufactured prior to the dates indicated and bearing the markings applicable hitherto may still be sold and transferred to the end user.

12.2. On each weapon, and on each determined part separately presented for testing, additional proof marks allowing the determination of the Proof House and year of testing will be affixed. [XXX-39]

12.3. Furthermore, for smooth bore weapons, the depth of the chamber should be indicated on the barrel. [XXX-44]

Article 13 Superior proof

In addition to those cases in which this proof is required by the provisions of the C.I.P., the superior proof shall be performed by the Proof Houses on demand.

In all cases, the superior proof shall include:

- the application of the Standards contained in Articles 3 to 9 and 12 above; and
- the application of a special proof mark which differs from the proof mark relating to the normal proof.

Article 14 Voluntary proof.

14.1. The voluntary proof shall be carried out in accordance with the provisions of Articles 3 to 9.

14.2. A firearm may be submitted for voluntary proofing by Proof House in the country which performed the compulsory proof:

a. If the firearm has not undergone any of the operations referred to in Paragraph 11.1 since the compulsory proof, and if it has been declared safe in the voluntary proof, then a proof mark shall be applied and/or a safety certificate shall be issued indicating:

- the characteristics of the firearm;
- the date of the voluntary proof.

b. If the firearm has not undergone any of the operations referred to in Paragraph 11.1 since the compulsory proof, but if it was rejected in the voluntary proof, then a special mark to be defined shall be applied to the firearm, indicating 'Danger au tir' (dangerous if fired). A certificate shall be issued indicating that the firearm may no longer be fired, and stating:

- the characteristics of the firearm;
- the reason for its rejection;
- the date of the voluntary proof.

c. If the firearm has undergone any of the operations referred to in Paragraph 11.1 since the compulsory proof, as a consequence, it now falls within the conditions stipulated in Article 11.

14.3. A firearm may be submitted for voluntary proofing by a Proof House in a country which did not perform the compulsory proof:

a. If the firearm has not undergone any of the operations referred to in Paragraph 11.1 since the compulsory proof, and if it has been declared safe in the voluntary proof, then the national proof mark shall be applied without removing the original proof marks and/or a safety certificate shall be issued.

b. If the firearm has not undergone any of the operations referred to in Paragraph 11.1 since the compulsory proof, but was rejected in the voluntary proof:

- in the case of a used firearm: see Paragraph 14.2;
- in the case of a firearm which is obviously new:
- immediate notification shall be given to the Proof House which applied the compulsory proof marks, and the procedure stipulated by the C.I.P. for resolving disputes shall be adopted, if necessary; a mark indicating 'Danger au tir' (dangerous if fired) shall be applied to the firearm with the agreement of the Proof House which performed the compulsory proof.

c. If the firearm has undergone any of the operations referred to in Paragraph 11.1 since the compulsory proof, as a consequence, it now falls within the conditions stipulated in Article 11.

Article 15 Proof which may be required by a Member State

In the event of firearms which have been proofed in accordance with regulations in a member country of the C.I.P. no longer meeting the requirements of the C.I.P. on which their acceptance was justified, the Member States of the C.I.P. in which these firearms are located shall be free to subject them to a new proof in accordance with the Standards laid down in Article 14 above. Similarly, this new proof may be performed if the national regulations of the country in which the firearms are located require the proof to be repeated at regular intervals.

Article 16 Official records

On completion of the proofing operations, a report shall be prepared which contains the following information:

- the serial number and the date of the report;
- the nature of the proofing;
- identifying features of the firearm;
- in the event of rejection, the nature of the fault.

Material quality and wall thickness of barrel and chamber of small arms - Recommendation [Minutes XVII, XXIII] (see Annex A.4.1.)

Stress arising in rifle barrels (Annex 1 to A.4.1.) [Minutes XVII] (see Annex A.4.2.)

Periodic weapon re-proof - Recommendation [Minutes XXIII] (see Annex A.4.3.)

Non destructive testing – Recommendation [Minutes XXIII] (see Annex A.4.4.)