ATG-PLT Rules

In litigation, the French version applies

1 Purpose and scope

These product Certification Rules of the ATG Mark shall apply in addition to the General ATG Certification Rules and define the specific conditions for the granting and maintenance of the ATG Mark for different product families:

- **« PLT » kits, Pliable Linear Tube :**

  - **French market:**

- Stainless steel pliable corrugated tubing kits for gas with an operating pressure up to 2 bar, compliant with standard XP E 29-826 in the February 23rd 2018 modified decree's application domain, completed by AMG's guide.

  This decree admits the ATG mark granting by CERTIGAZ as proof of conformity to the products specifications since January 2020.
  This standard also includes the "**Livestock PLT**" application precedingly included in the CCH2010-02 up to DN25 max under 2 bar preconised by GROUPAMA in the installation and using guide for gas heating for livestock and farm buildings.

  For information, the Decree of December 27th 2013 deals with livestock installations classified for environmental protection.

- Stainless steel pliable corrugated tubing kits in buildings for gas with an operating pressure up to 0.5 bar (Pliable Linear Tube or "**PLT**" kits), in accordance with Specifications AFG CCH2007-01 of June 2014, and certified before 2020 are accepted until December 31st 2022 in compliance with the AMG guide. After this date, only the XP E 29-826 will be applied.

  - **Export market:**

- Stainless steel pliable corrugated tubing kits in buildings for gas with an operating pressure up to 0.5 bar (Pliable Linear Tube or "PLT" kits), in accordance with EN15266 standard.

- **Short hoses (FC)** for the fitting of piped gas distribution infrastructure within the scope of the amended modified Decree of February 23rd 2018 and the AMG guide, in accordance with Specifications AFG CCH 2006-01 of March 2015. This decree recognises the granting of the ATG Mark by CERTIGAZ as proof of conformity to the product specifications since January 2020.

  Short hoses are classified into 3 families that correspond to the type of use:
  - Penetration hoses (FCP)
  - Metering hoses (FCC)
  - Pressure reducing hoses (FCD)

These specifications are available on the AFG website, www.afgaz.fr under *Technical activities – Reglementary and technical documentation*.

2 Definitions

The definitions of CCH and standards, designated here by normative documents, apply to their respective particularity.

3 Marking

The Marking rules for products, their packaging and instructions are defined in the respective normative documents.

In addition to these requirements, and after the ATG certification, the tubes and fittings constituting PLT kits and short hoses shall bear the letters ATG or the ATG logo under the same conditions as other required markings.

Other information, required by other markets, can include product marking but cannot be confused with anything else and should be explained in the product instructions.

The marking process must ensure the durability of the information.

NB: For the testing procedure, an uncomplete marking is tolerated but the process must remain the same.

The instructions, packaging and trade documents relating to the accessories certified by the ATG Mark must refer to the ATG Mark and bear the ATG logo in such a manner as to prevent any misinterpretation if accessories are not certified.

The instructions shall describe the implementation of protections (tape width, length of heat-shrinkable sheath, shrinkage temperature, minimum overlap percentage on the tube sheath and on the fitting, minimum overlap percentage at each pass of the tape, sleeve expiry date management if necessary, recommendations of application to prevent protection contamination, etc.).

The instructions that accompany a product shall comply with the reglementation required informations, among other things, the instructions shall be in French language and mention the required security instructions and informations along with the holder contact.

4 Certification criteria

4.2 Obligations

No specific obligations other than those specified in the application form (Annex 1).

Those obligations meet the NF EN ISO CEI 17065 norm certification requirements.

4.2 Applicable requirements

4.2.1 For PLT kits

PLT kits bearing the ATG Mark shall comply with the following specifications:

- Standard XP E 29-826 for French market or EN15266 for export as mentioned on §1. One product can meet both requirements in accordance with previous marking's conditions.
- Further information on tests plans are mentioned on Annex 2.

4.2.2 For short hoses

Short hoses bearing the ATG Mark shall comply with the following specifications:

- Specifications AFG CCH 2006-01 mentioned in §1.
- Supplement to CCH 2006-01 for the implementation of tests, mentioned in Annex 3.

4.3 Quality management requirements

4.3.1 Quality management system

The minimum provisions in terms of quality assurance that the applicant/holder shall adopt and set up so that the products covered by the ATG-PLT Mark are produced and/or distributed at all times in accordance with these certification guidelines defined below:

By making use of the ATG Mark, the holder makes a commitment regarding the permanent quality of the certified products that it manufactures and/or supplies to its customers. In the context of the ATG-PLT Mark, the applicant/holder shall provide proof of the existence and effectiveness of its quality record.

The objective to be achieved by the applicant/holder is process control (as defined in Standard NF EN ISO 9000) and the maintained compliance of its products with the models initially accepted.

Achieving this objective requires that the applicant/holder should implement its own means whose performance is assessed during the admission visit and verified during follow-up visits.

The quality requirements of this ATG-PLT Mark are defined below and are based on the requirements of NF EN ISO 9001 whose scope is limited to the field of application.

The following table summarises these requirements based on the version of the standard.

Quality requirements	**Exigences* § NF EN ISO 9001 (2015)**	
General requirements	4.1 - 4.2	Required for the product manufacturing processes.
Documentation requirements	4.4 – 7.5	Required
Management responsibility		
Management commitment	5.1 - 5.2	Required
Responsibility and authority	5.3	Required
Management representative		Required
Management review	9.3	Required
Resource management	7.1 à 7.4	Required
Product development		
Product development planning	8.1	Required
Customer-related processes	8.2	Required for customer complaint management
Purchasing	8.4	Required
Service production and preparation control	8.5.1	Required
Identification and traceability	8.5.2	Required
Product preservation	8.5.4 - 8.5.5	Required
Monitoring and measuring equipment control	7.1.5	Required
Measurements, analysis and improvement		
Product monitoring and measurement	8.6 - 9.1	Required
Non-conforming product control	8.7 - 10.2	Required
Corrective action	10.2	Required

(*) These requirements also apply to subcontractors if any

4.3.2 In-process control plan

4.3.2.1 Raw materials

The characteristics of materials used in the manufacture of accessories shall be guaranteed by the manufacturer (raw material certificates or internal controls).

The traceability of batches of raw materials in relation to batches of finished products shall be ensured.

4.3.2.2 Dimensional characteristics

The manufacturer shall set up procedures to ensure that the allowable manufacturing tolerances for the accessories (pliable tubing, fittings, hoses, coatings and components) are in accordance with the declared values drawn from the initial type tests.

The definition and frequency of the necessary metrological verifications are left to the discretion of the manufacturer.

4.3.2.3 Minimal in-process tests, batch release and process monitoring

A batch of PLT pliable tubes or short hoses is a set of products with the same definitions having the same nominal diameter (DN) and marking, manufactured on the same machine without modification of the manufacturing parameters, from the same batch of raw materials. The batch shall be defined and identified by the manufacturer.

A batch of fittings, for the various PLT kits, is a set of fittings with identical dimensional characteristics, having the same nominal diameter and same marking, manufactured during the same production run from the same batch of raw materials.

Production run means the period during which a defined and homogeneous quantity of the accessory is manufactured under uniform conditions.

The characteristics and minimum frequencies of the tests shall be in accordance with the data in the tables in the annex 2 for the PLT kits or annex 3 for the FC.

For PLT kits or FCs, in the event of non-compliance of only one sample in the tested batch, another batch of samples consisting at least twice the original batch of samples, from same production batch, shall be retested; and if one of the new samples is found to be non-compliant, the production batch shall be rejected and for each non-conformity, analysis and corrective actions shall be carried out.

5 ATG certification process

5.1 Admission

5.1.1 Application file

The model application file is given in Annex 1.

If an initial company certified product is remanufactured by another entity, with or without commercial brand or reference change, then a maintenance application file must be sent.

5.1.2 Audits

The main manufacturing site is where batch release controls, packaging and provision of products are carried out. It is always audited during admission.

If it is different from the main manufacturing site, the manufacturing site of PLT or short hoses must be audited at the time of admission.

Other manufacturing sites of the components of products covered by the application for admission shall be audited only when the manufacturer cannot demonstrate that it has sufficient control over it (ISO 9001 § 8.4 and § 9.1). They are referred to below as secondary manufacturing sites.

When an ISO9001 certified site is audited, and after the analysis of the ISO9001 report audit, the audit of § 4, 5 and 9.3 of the said standard (more details on the table § 4.3.1) is not necessary.

The audit duration on sites cannot be inferior to one day and an additional 0.5-day fee is due for the planification, preparation, audit plan and audit report redaction and, if needed, the constated non-conformities aftercare.

If more than one site is audited, the audit duration is, by default, of one day by site, except if the site's activity does not require it. The audit plan details the duration and the onsite audited activities. In the case of a multisite audit, a 0.75-day redaction fee is applied.

By derogation, the SQUAL100 procedure is applied if the audit cannot be physically attended due to sanitarian issues. However, this disposition is not applicable in the case of critical products that required a 100% testing procedure.

If a company uses subcontracting with another company, if this activity can impact the product quality and the initial company cannot control this impact, then the subcontractor is also audited by CERTIGAZ.

In the case of a maintenance procedure, a 0.5 day reduced audit is realised by CERTIGAZ to check the markings, instructions and packaging conformity and an additional 0.5 day redactional fee is due.

5.1.3 Tests

Where possible, tests are carried out on products taken as samples by CERTIGAZ during audits specified in 0 or otherwise from retail shops or from the stocks of a reseller at the expense of the applicant.

Nevertheless, these tests may be performed on samples supplied by the applicant provided that it guarantees that they are representative of the type submitted for admission.

The test specimens shall be produced by the manufacturer or its representative and then shipped to the laboratory.

The tests shall be performed by CETIAT, which is an independent Mark laboratory.

Any report relating to tests other than those in the above paragraphs issued by a laboratory accredited according to ISO 17025 may be considered after analysis by CERTIGAZ. In this case, a cross-check test shall be carried out by CETIAT.

5.1.3.1 PLT kits specifics tests

The tests and admission controls are:

- Defined in paragraphs 5 and 6 of the XP E 29-826 and annex 2, for the French market PLT kits.
- Defined by the EN15266 for export.

  In the case of XP E 29-826 tested products, the extension is possible if the following tests are made and conform:
  - Low temperature resistance as defined by EN15266 §5.13.
  - Maximal PLT supports charge as defined by EN15266 §5.19, if applicable.

The tests shall be performed by CETIAT, except for the tests mentioned below which shall be carried out by other laboratories accredited according to ISO 17025 for those specific tests:

- Sheath ageing,
- High temperature resistance,
- Fire reaction,
- Low temperature resistance (for EN15266),
- Maximal PLT supports charge (for EN15266).

This cross-check test shall be identical to the admission tests but shall only be performed on two DNs (see Annex 2):

- 1 DN from family X,
- 1 DN from families Y or Z,

Family	DN	PLT range cross-check- XP E29-826
X	10	1DN
	12	
	15	
Y	20	1DN, preferably the largest or from DN32/40/50
	25	
	32	
Z	40	
	50	

5.1.3.2 Short hoses (FC) specific tests

Tests and admission controls are defined on CCH2006-01 §7 and §8, and on annex 3 for the FC.

The cross-checking tests are identical to the monitoring tests for DN of each flexible type (see annex 3).

5.1.3.3 Threaded extremities specific tests for PLT kits and SH:

Depending on the product family, the following norms apply by fitting diameter:

- JPC/JPG => NF D36-136 dimensions and NF E 29-532 (§7 & 8)
- JSC => NF D 36-136 dimensions and NF E 29-536 (§6 & 7)
- GPL => NF D 36-136 dimensions and CCH2020-04 (§4.3 & 4.4)

- EN10226-1 => CCH2020-05 (§4.3)

NB 1 : The here-above § match with the nut tightening and fissuration under ammoniacal stress resistance tests. Those number could change with a revision of the reglementation documents.
NB 2 : For DN superior to 32, the nut tightening resistance test can be stopped before the breach if the applied couple has reached at least 120% of the minimal breach couple required in accordance with the DN and specifically for DN50.
If the manufacturer and/or subcontractor are certified in accordance with NF540 rules for same family with the same material (shade of normalized alloy) and same DN couplers, the tests are not required for the ATG mark.

To make those fissuration under ammoniacal stress resistance tests:

- The PLT part is not evaluated again and is made of a type 1 reduced length sample, for example 10 cm. The PLT fitting and ending part can be combined.
- The FCD are the only one concerned by a JSC fitting. They can be shorter and presented on the form of semi-finished products (without braid or sheath) for only the fitting is evaluated.

5.1.3.4 Marking durability specific tests

To check the products marking durability, the §9 of the NF E 29-135 norm is applied during admisison and marking process modification:

- First category: Name, sigil or manufacturer registered brand, GAS application if needed and ATG conformity mark.
- Second category: Every other marking elements.

PLT tubes are not subject to those tests since durability has been evaluated during the sheath ageing tests and the marking sequence is repeated every 1 meter.

5.1.3.5 Brazed PLT fitting specific tests

For specific mixed fittings:

- with a PE pipe with a NF136 rules certified weldable fitting,

- with a meter which requires a specific fitting (a grip or a 180°bended part). Those fittings are certified according to the NF540 rules with a weldable copper ended tube,

- with a tap which requires a specific fitting (a gas stove grip for example). Those fittings are certified according to the NF540 rules with a weldable copper ended tube,

- with a sphero-conical fitting with a weldable end. Those fittings are certified according to the NF540 rules,

The brazed PLT fittings must be certified according to the ATG-PLT mark and used for the fabrication of finished products made by brazing with or without the addition of copper tubes. Those products must be certified according to the NF540 rules.

For information, the manufacturer or his subcontractor shall make a certification appliance according to the NF540 rules and respect the ATG B 600 specifications, the EN1254-1 norm and SRACxxx-NF specifications (see link NF 540 RAC GAZ | Téléchargements | CERTIGAZ) including :

- the copper tube, if used, must be certified according to NF090 rules,

- the brazing couples must be certified according to ATG-Brasures rules,

- the binding dimensions and tolerances are conform to the specification EN1254-1,

- the dimensions and external tolerances of the brazed zone comply to SRAC in order to guarantee an homogenic heating of the 2 brazed components.

Those measures are verified during audits and brazing operators qualification (DMOS and QMOS).

If the manufacturer and/or the subcontractor are certified in compliance to the NF540 rules for fittings with brazing, the audit is not required for the ATG mark.

5.1.3.6 Special cases :

If the application concerns a product modification or a range extension, the tests plan can be reduced. This plan is defined by CERTIGAZ depending on the nature of the said modification or extension.

The CETIAT's laboratory can be solicited to make a reduced tests plan. In case of doubt, the mark specific comity can be consulted. And if the doubt persists, by measure of precaution and security, the initial tests are applied.

For the PLT kits, this reduced tests plan is already defined for 2 cases:

- For an application for the certification of livestock the maximal DN is 25 with a 2 bar MOP:
  - In the case of a certified range extension according to the XP E 29-826, class 2, norm, no test is required.
  - In the case of a certified range extension according to the XP E 29-826, class 1 (or CCH2007-01), the tests plan is the same as the one described below:

- For a PLT kits certification application up to 2 bar with the same characteristics as a certified PLT kits range below 0.5 bar, the tests plan is on annex 2.

For short hoses with a GrDF operating licence before 2012, admission tests shall be reduced to monitoring tests for one DN of each hose type.

5.2 Monitoring

5.2.1 Audit(s)

The monitoring audits shall be carried out under the same conditions as the admission audits provided for in 0.

The monitoring audits shall be performed:

- annually for the manufacturing and control of flexible hoses,
- every 2 years for the other activities covered in the admission audit.
- In the case of a maintenance or for externalized activities with few impacts on the product, the monitoring audit is done only once during the 3 years validity of the said certificate.

By special dispensation, the SQUAL100 procedure applies if the audit cannot be physically made due to sanitarian issues.

5.2.2 Tests

The monitoring tests shall be carried out every year by CETIAT on products taken as samples by CERTIGAZ during audits specified in 0 or otherwise, if the tests allow it (tests on FC semi-finished products, for example), from retail shops or from the stocks of a reseller at the expense of the applicant.

After the picking, the samples are made by the applicant and shall be sent to CETIAT at the expense of the applicant, within a maximum of one month.

Thus, irrespective of the product, all DNs shall be tested over several years at the rate of one DN per year. A rotation is set up so that all the DNs are monitored for as short a time as possible.

5.2.2.1 For PLT kits, the monitoring tests shall be the same as the admission tests, but they shall be performed successively on only one DN from only one family X, Y or Z.

However, some types of tests shall not be performed as part of the monitoring, see Annex 2.

For the CCH2007-01 certified products, the monitoring is done in compliance with the XP E 29-826 with a 0,5 bar MOP. Those dispositions apply until December 31st 2022.

Before this date, the products must be modified to refer to the XP E 29-826 standard in order to comply with January 1, 2023.

Before the products taken as samples by CERTIGAZ are shipped, the manufacturer shall produce the test specimens for the laboratory. To respect the chronology of the field, for chemical resistance test specimens, the manufacturer shall bend the test specimens and then apply the protection(s) recommended in the instructions.

It shall also attach the instructions and some additional protective tape for repair.

5.2.2.2 For short hoses (FC), the monitoring tests shall be the same as the admission tests, but they shall be performed successively on only one DN per type of FC (FCP, FCC and FCD).

However, some types of tests shall not be performed as part of the monitoring, see Annex 3.

5.2.2.3 Welded fitting specific tests shared by PLT kits and FC

Depending on the product family, the following norms are applied :

Family	Norm files	BRT sampling	AT sampling
JPC/JPG GPL	NF D36-136 dimensions and NF E 29-532 (§7 & 8) NF D 36-136 dimensions and CCH2020-04 (§4.3 & 4.4)	Statistic control of each production batch or reception checking of the swivel nuts resistance to the tightening couple (2 samples min from the batch)	one fitting diameter per year
JSC EN10226-1	NF D 36-136 dimensions and NF E 29-536 (§6 & 7) CCH2020-05 (§4.3)		one fitting diameter per year

The measures are the same as § 5.1.3.3.

When the FCD product range comes down to 1 certified product, the monitoring takes place every 2 years instead of every year (see annex 3).

5.2.2.4 Marking durability specific tests

The marking durability monitoring is done annually by the manufacturer according to the prescriptions of the paragraph 9 of the NF E 29-135 norm and §5.1.3.4. Those measures are verified during the audits.

For the PLT pipes, the durability is checked during the admission tests, so every change of process or marking ink (brand, type, composition…) must be subjected to an extension application to CERTIGAZ, for a file update and possibly the realization of an ageing test for one DN in order to guarantee the marking durability.

Those modifications are checked during the audits.

6 Approval

These ATG-PLT Certification rules:

- were approved on **12/20/2022** by the Managing Director of CERTIGAZ after consulting the ATG-PLT Special Committee;
- are applicable from **01/02/2023**, except for the modifications subjected to a transitional period mentioned in the modifications table;
- cancel any previous version;
- may be modified by the Managing Director of CERTIGAZ after consulting the ATG-PLT Special Committee.

7 Summary of changes

Revision no.	Date	Main changes made	Impact on the requirements of products already certified and/or transition period; integration/implementation verification procedures.
Creation	15/04/2009	Creation of ATG-PLT Specific Rules	
Rev1	12/03/2013	- § 5.1.3 possibility of a reduced test plan in case of modification - § 5.2.2 details for the monitoring all DNs by annual rotation - Change of address of CERTIGAZ	
Rev 2	25/07/2013	- The Rules govern PLT kits and short hoses based on their respective CCH specifications - For PLTs: - consideration of the decisions to amend the CCH of November 2012 for implementation - modification of frequencies and sampling for in-process control - details for the technical file and manifolds	
Rev 3	25/03/2014	- Addition of § 5.5.4 in Annex 2, manifold details forgotten in Rev 2 - Presentation of the information in the technical file, Annex 1, Documents 2 and 3	
Rev 4	23/01/2015	- Amendment only to the name of the ATG-PLT Mark, instead of ATG-PLT/FC, to rectify a discrepancy following the COFRAC audit concerning the filed title. However, the ATG-PLT rules apply to PLT kits and short hoses (FC). - Details on the deadline for sending samples (1 month maximum) to the laboratory and to inform CERTIGAZ (§ 5.2.2 and DOC1 of Annex 1) following the sampling for monitoring tests.	
Rev 5	22/09/2015	- Consideration of the revisions of the specifications in relation to the amended Decree of 16 July 1980. - For short hoses, deletion of high temperature resistance, tensile strength and salt spray resistance tests. According to the CCH version. - Integration of a 3rd family of products: livestock PLT kits. - Rules restructured with an annex for each product family. - Details for the abandonment of a gas installation and the use of protective sleeves for PLT kits. Addition of prohibition note. - Modification of ammonia stress resistance specifications for PLT and livestock PLT kits. Details for chemical resistance tests (tube/fitting joints and sheath repair) for PLT and livestock PLT kits. - PLT or livestock PLT fittings for LPG, M20x150 or G3/4 installation. - Details on sampling for admission, cross-check or monitoring tests for short hoses. - Details for tees and manifolds of PLT kits.	Transition phase until 31/12/2015; new requirements imposed from January 2016.
Rev 6	03/05/2016	- Integration of the 2 versions of ISO9001, 2008 and 2015 in §4.3.1 - In Annexes 2 and 3, details for end PLT fittings with the use of JSC fittings according to Standard NF E 29-536 mentioned in the normative references of CCH, GPL and “mixed”	No impact on the requirements of already certified products – no need to set a transition period – no verification to be done
Rev 7	10/11/2017	Addition of PLT 2 kits according to Standard XP E 29-826 with a 3-year transition period for the termination of CCH2007-01 and CCH2010-02 with the details in Annex 5 - Information for the preparation of test specimens: • Management of chemical resistance and ageing tests according to the various types of protection • Bending and affixing protections by the manufacturer	- Reduced test plan for extension of a PLT 500 mbar range to a PLT up to 2 bar range - no verification by anteriority
Rev 8	February 2021	- Update mentioning the new rules relating to the February 23rd 2018 decree and AMG guide - Removal of the reference to the 2008 version of the ISO9001 norm - Removal of CCH2010-02, PLT livestock, replaced by XP E 29-826 norm - Removal of the tests in accordance with CCH2007-01 - Addition of ATG certification for export market according to EN15266 norm	- already applied since January 2020 - more impact since 2018 - no certification - covered by XP E 29-826 - new
Rev 9	26/04/2021	- Precision on the instructions for the PLT protection awaiting on worksite - Labels for FCP rated flow rates - Maintenance application - Gestion of multisites audits, for maintenance, remotely and for subcontractors - Precision on technical file in unlocked pdf format - Various precisions and titular or representative countries in Europe - Precisions for pliability test - Tests frequency every 5000 m eventually limited to 1 per month - FC AT frequency if the range is limited to 1 product brought to 2 years - - Clarification on marking process	Already applied or applicable without delay
		- Tests on threaded fittings	Applicable during certified products monitoring for 2021
		- Certification of the fittings made by welding multiple elements - clarification	1 year after the certification of welded fittings NF540
		- Tests on markings durability and its monitoring by the manufacturer - clarification	Transition phase for certified products checking until 12/31/2021

Revision no.	Date	Main changes made	Impact on the requirements of products already certified and/or transition period; integration/implementation verification procedures.
Rev10	02/01/2023	- Modification of the adress of CERTIGAZ and various minor precisions/corrections Withdrawal of CCH2007-01 on 31/12/2022 according to AMG guide	without object
		- §5.1.3.5 specific brazed couplers ➔ NF540 certifcation - §3 & 5.2.2.4 precisions on marking and instructions - §5.1.3.3 & 5.2.2.3 precisions on fittings tests on production or batch reception test (BRT) + annexs 2 §B & 3 tests §C, BRT - Annexs 1 DOC3 & annex 2 §7.1 ➔ Addition of ground clamp & conductivity - Annex 2 §5.16 electric conductivity test with clamp - Annex 3 §B addition of end fittings tests according to respective specifications	12 months max after the date of application

ANNEX 1
CONSTITUTION OF THE APPLICATION FILE

- Model application letter for admission reproduced on the letterhead of the manufacturer and prepared in accordance with the attached model (Document no. 1)
- General information form (Document no. 2)
- Identification form of the product subject to admission (document n° 3 for PLT kits or n° 4 for FC)
- Technical file:

  NB: This technical file is sent in a single file in unlocked pdf format so that it is validated by CERTIGAZ.

  PLT, PLT 2 or livestock PLT kits

  - Dimensioned drawings of each tube (diameters, thickness and waves), fitting (in accordance with § 5.4 and 5.5 of CCH 2007-01 or CCH 2010-02 or § 4.4 and 4.5 of Standard XP E 29-826), accessory and seal;
  - definition of markings and batches;
  - certificate of conformity of the seal raw material according to NF EN 549 or NF EN 682;
  - Instructions in accordance with § 8 and 9 of CCH 2007-01 or CCH 2010-02, or § 7 and 8 of Standard XP E 29-826 (instructions for jointing, installation, pressure drop, installation warning, etc.).

  Short hoses

  - dimensioned overall drawings, dimensioned drawings of each component (corrugated flexible metal duct, end piece or connection end) with the definition of raw materials;
  - definition of the metal braid (size and material of the wires, number of wires, number of strands, angle and braid pitch);
  - definition of the plastic sheath (FCC and FCD);
  - definition of anti-corrosion coating (FCP);
  - installation and installation instructions in accordance with § 11 of CCH 2006-01;
  - the mode of protection and packaging in accordance with § 12 and 13 of CCH 2006-01.

DOCUMENT No. 1

ADMISSION APPLICATION FORM

(to be drawn up on the manufacturer's letterhead)

Letter addressed to:

Dear Madam
CERTIGAZ
1, rue du Général Leclerc
CS 60254
F – 92047 PARIS LA DEFENSE CEDEX

Subject: **Application for admission (initial, by maintain, extension) to the ATG-PLT Mark**

Dear Madam,

I request permission to affix the ATG Mark on the products that I manufacture, in accordance with the corresponding specifications and the ATG-PLT Specific Certification Rules in force, the characteristics of which are given in the appendix

I declare that I have read the aforementioned texts and the ATG General Certification Rules.

I agree:

- to comply fully with the requirements of the Certification Rules, as well as with the decisions taken or to be taken, in execution of said requirements;
- to sell products bearing the ATG-PLT Mark only after taking all the precautions to ensure their compliance with standards and specifications;
- to reserve the Mark and the reference of the products submitted to the ATG-PLT Mark only to products conforming to those certified;
- to take all measures to protect the trademark submitted to the ATG-PLT Mark in order to have an exclusive right to this Mark under the industrial property legislation;
- to affix the Mark, unequivocally, on the certified products and only on them;
- to carry out the in-process controls required under the Rules of Certification of the Mark;
- to report without delay to CERTIGAZ any incident, any modification to the design, manufacturing method or organisation, and more generally, any fact likely to cause a variation from the conditions in which the Mark was granted;
- to facilitate the task of auditors mandated by CERTIGAZ within the framework of their missions;
- to provide any supporting documents required for the application of a penalty;
- to provide free of charge the products designated by CERTIGAZ for verifications and send them at my expense and under my responsibility to the laboratory designated by CERTIGAZ, within a period of one month and to inform CERTIGAZ thereof;

DOCUMENT No. 1

(to be drawn up on the manufacturer's letterhead)

- to pay the amount of the costs of examining the application laid down in the financial framework of the Mark, and to make any subsequent payments that may be claimed in accordance with the rules of the Mark;
- not to indicate on all the printed advertisements or catalogues, characteristics other than those which are confirmed by the tests and which will be communicated.

(2) I also authorise the company ..... ***(3)*** represented by:

Mr/Mrs *(surname)*..... *as (capacity)* …….....

to represent me on French territory for all issues relating to the use of the ATG-PLT Mark.

(2) I consequently request that the expenses that are to be borne by me be invoiced directly to the said representative. This agent will ensure immediate settlement of invoices upon receipt on my behalf as bound so to do in accepting to represent me.

I undertake to inform CERTIGAZ immediately of any appointment of a new agent replacing the above-mentioned agent.

Yours faithfully,

Date:

Stamp and signature of the representative ***(4)(5)*** *Stamp and signature of the applicant* ***(4)(5)***

Stamp and signature of the manufacturer ***(6)***

Enclosures : General information form;
Product identification form;
Technical file.

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(2) Optional. This paragraph only concerns applicants located outside the European territory (EEA or EFTA)

(3) The designation of the agent company shall include: corporate name, form of the company, registered office, trade register number

(4) The signatures of the manufacturer and its representative in European territory (EEA or EFTA) must be preceded by the handwritten words "Approved for representation" and "Approved for acceptance of representation", respectively

(5) Signature preceded by the handwritten words "Read and approved"

(6) In case of application by maintain

DOCUMENT No. 2

GENERAL INFORMATION FORM

(To be attached to the technical file)

- **Company name and address of the applicant/holder:**

.....

.....

Contact person: ..... Telephone: ..... Fax: .....

Email: .....

Information for billing (VAT no., SIRET): .....

- Where applicable, **name and address of the agent in Europe:**

.....

.....

Contact person: ..... Telephone: ..... Fax: .....

Email: .....

Information for billing (VAT no., SIRET): .....

- **Company name(s) and address(es) of the tube manufacturing site(s):**

§ to be duplicated if multiple sites are concerned

.....

.....

Contact person: ..... Telephone: ..... Fax: .....

Email: .....

- **Company name and address of the packaging unit** (if different)**:**

§ to be duplicated if multiple sites are concerned

.....

.....

Contact person: ..... Telephone: ..... Fax: .....

Email: .....

- **Company name and address of the fitting supplier** (if different)**:**

§ to be duplicated if multiple sites are concerned

.....

.....

Contact person: ..... Telephone: ..... Fax: .....

Email: .....

- **Company name and address of the site to carry out the batch release test and PVT:**

§ to be duplicated if multiple sites are concerned

.....

.....

Contact person: ..... Telephone: ..... Fax: .....

Email: .....

DOCUMENT No. 3

PRODUCT IDENTIFICATION FORM – PLT kits (standard XP E 29-826)
(To be attached to the technical file)

- **Trademark:** .....
- **Trade reference:** append a table that includes the characteristics (reference, DN, designation, fittings, etc.)
- **Material specifications** (standard designation and reference standard):
  - stainless steel corrugated flexible tubes:
  - fittings (stainless steel, copper alloy, cast iron according to § 5.2, 5.5.1 of CCH 2007-01):
    - end fittings
    - coupling fittings
    - tee
    - manifold
  - corrosion-resistant metal support:
  - yellow/orange protective sheath (material and RAL colour):
- **Characteristics of seals and/or sealants** (§ 4.6 of XP E 29-826 norm)**:**
  - Supplier, nature, designation:
  - Hardness (seal) and temperature class:
  - Certification according to standard NF EN 549 or EN 682:
  - Other:
- **Marking** (according to § 7 of XP E 29-826 norm and ATG-PLT Rules)**:**
  - Tubes (PLT):
  - Fittings:
- **Resistance test pressure** (§ 5.6 of XP E 29-826)
- **Use of a protective sleeve for fittings** (§ 3.6.2 of XP E 29-826) **:**

	Heat-shrinkable sleeve (1)	Tape (1)	Other principle (1) : ……
Material			
Supplier			
Description			
Dimensions			
Colour (RAL colour)			
Specifications			

(1) Delete if not used and the method of application must be described in the instructions

- **Tightening torque of the fittings by DN (or torque on stop):**
- **Ground clamp by DN (designation, specifications…) :**
- **To be completed with overall and detailed drawings of tubes, fittings and components, sleeves and ground clamps**

DOCUMENT No. 4

PRODUCT IDENTIFICATION FORM – Short Hoses (FC)
(To be attached to the technical file)

- **Trademark:** .....
- **Trade reference:** append a table that includes the characteristics (reference, DN, designation, hose type, FC end fittings, etc.)
- **Material specifications** (standard designation and reference standard):
  - Stainless steel corrugated flexible tubes, § 6.1 of CCH2006-01:
  - end piece, § 6.2 of the CCH 2006-01 (steel or copper tube, stainless steel tubular part, nut, flange).
- **Welding process:**
- **Marking** (according to § 10 of CCH2006-01 and ATG-PLT Rules)**:**
- **Resistance test pressure** (PRM according to CCH2006-01):
- **Tightening torque of the fittings by DN** (types 3, sphero-conical joint for FCD and 4, flange joint for FCC):
- **Definition of the metal braid** (§ 6.3 of CCH2006-01 for the stainless steel grade, wire diameter, number of strands and wires per strand, braid angle and pitch for FCDs):
- **Definition of the plastic sheath** (according to CCH2006-01 for FCD and FCC)**:**
- **Definition of the anticorrosion coating** (§ 6.4 of CCH2006-01 for FCP)**:**
- **To be completed with overall and detailed drawings**

ANNEX 2

Supplement to XP E 29-826 standard, PLT kits up to 2 bar

A- Details on § of XP E 29-826 standard

3.6.2 Sleeve

In some cases, this sleeve is also used for repairing the sheath when it has been torn apart, cut or ripped up during the implementation or after.

4.4 Threads and end of PLT fittings

"Mixed" fittings with an ATG-PLT end and an NF136 end (PE fitting), for example, may be included in a catalogue when they are made by a factory-soldered joint. In this case, each part shall be certified and marked according to the respective Mark and the final fitting is certified by NF540.

4.5.3 Manifold and tee

Note 1: Depending on the manufacturing process, a leak test on the manifold or tee may be necessary.
Note 2: Two manifolds may be connected in series with a PLT tube.
Note 3: Based on these specifications, a tee is similar to a manifold but without attachment.
Note 4: Use of standard plumbing manifold or tee with conical or cylindrical threaded fittings is not permitted. The PLT tube must be connected directly.
Note 5: One of the connections of a tee may be an end fitting for connecting another type of gas line.

5.4 Pliability

In initial type tests (TT) as in monitoring tests by the manufacturer (BRT – Batch Release Tests) or the third party organisation (AT – Audit Tests), it is necessary to continue this test beyond 12 cycles, either until failure or at least up to 36 cycles to ensure the tube exhibits the same performance level, at each batch.

For TT and AT, tests are made with :

- 2 samples according to the norm modus operandi
- 2 samples until breach or 36 cycles max without stopping to 12 cycles to make a watertightness test.
- For BRT, the test is done with at least one sample until breach or 36 cycles max without stopping to 12 cycles to make a watertightness test. If a breach occurs before or at 16 cycles, a second test with double sampling must be done and watertightness must be verified after 12 cycles for 50% of the samples and until breach for the other 50%. Watertightness must be conform for the samples which endured 12 cycles. All results are registered.

If the tests means of the BRT made by the manufacturer and those done by the CETIAT have different results, CERTIGAZ can ask the manufacturer to make BRT on multiple samples and apply a limit other than 12 cycles to pronounce the conformity considering this correlation of results.

5.12 Chemical resistance

5.12.2.2 Test method for resistance to household cleaning products

Bleaching agent is a sodium hypochlorite solution at 9% by volume. For monitoring tests by the manufacturer, the solution may be an industrial solution with a guaranteed concentration between 6 and 14%. The report shall mention the solution used.

5.16 Electric conductivity

5.16.2 Test method

4) The measures are also repeated and recorded in the tests report but between the ground clamp, fixated on an end fitting and the other end fitting. The requirements remain unchanged.

7 Assembly and installation instructions

7.1 General

In addition, the installation instructions must mention:

- The fitting pending PLT on worksite must be sealed to prevent solid or liquid bodies intrusion and guarantee the product performances.

Sampling

The sampling in Table 11 is completed to take into account the additional information in these rules:

Characteristics	Admission	Cross-check (5)	DN add	Monitoring	§ norm		Sample type	No. of samples.	Conformity criterias
					XP E 29-826	EN 15266			
Dezincification	-	-	-	-	4.5.2	4.5.3	-	Supplier certificate	
Dimensional	All DNs	2 DN X et (Y ou Z)	DN	1DN	5.3	5.3	-	Tests in bold	Dimensions
Pliability (1)	All DNs	2 DN X et (Y ou Z)	DN	1DN	5.4	5.4	1	2+2	Leaktightness
Crush resistance	All DNs	2 DN X et (Y ou Z)	DN	1DN	5.5		1	4	Leaktightness and maximal deformation.
Stability under pressure	All DNs	2 DN X et (Y ou Z)	DN	1DN	5.6		1	1	Leaktightness and lengthening
Wear resistance of the outer sheath	All DNs	2 DN X et (Y ou Z)	DN	1DN	5.7		1	1	No full perforation
Structural resistance	All DNs	2 DN X et (Y ou Z)	DN	1DN	5.8		1	1	Leaktightness
Impact resistance	X and Y and Z	2 DN X et (Y ou Z)	DN	1DN	5.9		2	1	Leaktightness
Penetration resistance	All DNs	2 DN X et (Y ou Z)	DN	1DN	5.10		1	1	Leaktightness
Tensile strength	All DNs	2 DN X et (Y ou Z)	DN	1DN	5.11		1	1	Leaktightness
Chemical resistance	Y	Y	DN	1DN	5.12		2	2 per chemical agent (2)	Leaktightness and no sign of deterioration
	Y	Y	DN	1DN	5.12		1	1 per chemical agent (3)	
Low temperatures resistance	Y	-	-	-	NO	5.13	2	1	Leaktightness and no sign of deterioration
Sheath ageing and marking	X and (Y or Z) (4) (5)	-	-	-	5.13	5.14	2	2	Leaktightness and no sign of deterioration
Leaktightness in case of fire	X and Y and Z	-	-	-	5.14	5.15	2	2	Admissible leak level
Reaction to fire	X and (Y or Z) (5)	-	-	-	5.15	5.16	According to annex A and B		Euroclasses classification
Electrical conductivity (6)	X and Y and Z	2 DN X et (Y ou Z)	DN	1DN	5.16	5.17	2	2	Electrical resistance
Pressure drop	All DNs	-	DN	-	5.17	5.18	Tables 9 and 10		Pressure drop declaration
Stress corrosion	All DNs	2 DN X et (Y ou Z)	DN	1DN	5.18	4.5.2	2 shorter	1	Leaktightness and no breach
Maximal charge for PLT supports	X and Z	-	-	-	NO	5.19	tubes	2	Admissible distorsion

(1) *With the recommendation laid down in § 5.4 of this annex.*

(2) *If the application for certification provides for 2 types of protection (tape or heat-shrinkable sheath):*
- *Admission or cross-check tests for chemical resistance shall be carried out on half with each type of protection (1 sample per chemical agent and per type of protection);*
- *Monitoring tests are performed by annual rotation of the type of protection.*

(3) *To ensure the performance of repair tapes, during chemical tests, the sheath shall be damaged and then repaired as follows by the laboratory on a specimen at its disposal:*
- *a strip approximately 30 mm long and 2 mm wide is cut in the axis of the tube, on the central part of a type 1 test specimen.*
- *the area is then protected by a protective tape according to the recommendations of the manufacturer, in the instructions for use.*
- *the test specimen is then formed into a U-shape and tested like the other type 2 test specimens.*

(4) *Half of the test specimens are equipped with protective sleeves if tapes and heat-shrinkable sleeves are recommended. At the end of the ageing test, these sleeves must remain in place to ensure their function.*
(5) *Preferably, the largest DN is selected for the family pair Y or Z.*
(6) *one end of the sample is equiped with a ground clamp in order to take the measurements with or without clamp.*

Specific tests on end fittings according to their specifications add up to those tests.

In the case of an extension of a PLT 500 mbar range to a PLT up to 2 bar range, the admission tests are simplified as follows :

- For a new DN, concerned by the 2 bar service pression, the concerned tests by DN are made according to the table hereabove, see DN add column.
- For identical DNs, concerned by the 2 bar service pression, the pliability test alone is made for each concerned DN, according to the table hereabove

B- In-process monitoring plan, batch release (BRT) and process monitoring (PVT)

Characteristics	DN or family to be tested	Paragraph of CCH2007-01 specifying the corresponding test	Minimum number of samples per test	Minimum test frequency	Monitoring type
Leaktightness	All DNs	5.2.2	100%	100%	In-process
Visual appearance	All DNs		100%	100%	In-process
Dimensional	All DNs	In conformity with the technical file	Statistical	Sampling distributed / batch	Batch release
Pliability (1)	All DNs	5.4	1	Each batch of tube	Batch release
Swivel nuts resistance to tightening couple (JPC/JPG/GPL/JSC)	All DNs	5.2.2.3	Statistical 2 samples min from the batch	Each batch of coupler	Batch release
Crush resistance	All DNs	5.5	1	1 per year	Process
Wear resistance of the outer sheath	X / Y / Z	5.7	1	4 per year	Process
Structural resistance test (3)	All DNs/year	5.8	1	Every 5,000 m (3) and at least 4 per year	Process
Impact resistance	All DNs	5.9	1	1 per year	Process
Tensile strength	All DNs/year	5.11	1	4 per year	Process
Chemical resistance (2)	X / Y / Z	5.12	1 / chemical agent	2 per year	Process

(1) see also §5.4 of this annex.
(2) If 2 types of protection (tape or heat-shrinkable sheath) are certified, the process monitoring tests shall be performed by half-yearly rotation of the type of protection.
(3) If the production gets to the point where this test can be repeated during a one-month length of time, making only one test per month is acceptable.

For the tests concerned by X/Y/Z families, the tested DN is not automatically the one preconized in table 2. The recommendation is to test each DN by rotation during successive tests campaigns.

NB :
Those disposition remain the same for a PLT kit extension to export market according to EN15266 norm for the tests :
- Low temperature resistance, §5.13 ;
- Maximal charge for an admissible distortion of PLT supports, §5.19 if applicable.

ANNEX 3

Supplement to CCH 2006-01, Short hoses (FC)

A- Details on § of CCH 2006-01

7.2 Rated flow rate

7.2.1.3 Requirement

The table 8 is replaced with the following values :

DN	Minimal rated flow rate (m^3/h)
25	9
32	17
32/40	28
50	55

7.3 Leaktightness (correction partially made in the CCH2006-01 March 2015 revision)

7.3.3 Requirement

In helium sniff testing: the leakage rate shall be less than 10^{-4} mbar.l/s at PRM.

B- Test plan and sampling by test type

The sampling for each test, carried out by a third party, is defined in the table below according to:

- Specifications of §7 of CCH 2006-01 and these rules;
- The tests type (admission, cross-check or annual monitoring);

Test type		**Admission**			**Cross-check**			**Monitoring (4)**		
Sampling by test	PMS/PRM	0.5/1	0.5/1	5/7	0.5/1	0.5/1	5/7	0.5/1	0.5/1	5/7
	§ of CCH 2006-01	**FCP**	**FCC**	**FCD**	**FCP**	**FCC**	**FCD**	**FCP**	**FCC**	**FCD**
Dimensional (a)	Miscellaneous + DT	2/DN	2/DN	2/DN	2 for 1 DN	2 for 1 DN	2 for 1 DN	1 DN	1 DN	1 DN
Rated flow rate, 20 mbar (a)	7.2	2/DN	no	no	2 for 1 DN	no	no	1 DN	no	no
Leaktightness, PRM (a)	7.3	2/DN	2/DN	2/DN	2 for 1 DN	2 for 1 DN	2 for 1 DN	1 DN	1 DN	1 DN
Burst, 4xPRM	7.4.1	3/DN	3/DN	3/DN	3 for 1 DN	3 for 1 DN	3 for 1 DN	1 DN	1 DN	1 DN
Elongation, PRM	7.4.2	3/DN	no	3/DN	3 for 1 DN	no	3 for 1 DN	1 DN	no	1 DN
Bending, PRM	7.4.3 *(3)*	3/DN	no	3/DN	3 for 1 DN	no	3 for 1 DN	1 DN	no	1 DN
Cyclic fatigue, PRM	7.4.4 *(3)*	3/DN	no	3/DN	3 for 1 DN	no	3 for 1 DN	no	no	no
Impact resistance, PRM	7.4.5	3 DN25	3/DN	3 DN15	3 for 1 DN	3 for 1 DN	3 for 1 DN	no	no	no
Compression/extension, PRM	Table 5 + Annex B *(3)*	no	1 DN100	no	no	1 for 1 DN	no	no	no	no
Min. no. of samples		15/DN	9/DN	15/DN	15	7	15	3	2	3

(a) The samples can be used for destructive testing
(3) *See § D for the special testing conditions*
(4) *See § D for the special monitoring frequency conditions*

Specific tests on end fittings according to their specifications add up to those tests see § 5.1.3.3 & 5.2.2.3.

C- In-process monitoring plan, batch release (BRT) and process monitoring (PVT)

In accordance with Standard NF EN ISO 10380 and with CCH 2006-01, the corrugated flexible metal tube manufacturer or the assembler shall regularly monitor certain characteristics to ensure compliance with the declared values obtained in the initial type tests.

In-process

Characteristics	DN and hose type to be tested	Paragraph of CCH2006-01 specifying the corresponding test	Minimum number of samples per test	Minimum test frequency	Monitoring type
Leaktightness	All DNs of each type	§ 9	100%	100%	In-process
Visual appearance			100%	100%	In-process
Dimensional (according to CCH2006-01 and critical dimensions)			Statistical 1/batch min	Sampling distributed over the batch	Batch release
Weld appearance		§ 9	2% min from the batch	Sampling distributed over the batch	Batch release
Swivel nuts resistance to tightening couple (JSC)	All DNs for FCD	§ 5.2.2.3	Statistical 2 samples min from the batch	Each batch of coupler	Batch release
Appearance of the hose before preparation, after cleaning and after application of the coating	All DNs for FCP	§9, Table 12	100%	100%	In-process
°C and RH before application of the coating		§9, Table 12	2/station	Measurement distributed over the batch	In-process
Electrical non-porosity of the coating		§9, Table 12	Statistic	Sampling distributed over the batch	Batch release **(a)**
Tearing of the coating		§9, Table 12	1%	Sampling distributed over the coating batch	In-process
Flexibility of the coating		§9, Table 12	1%	Sampling distributed over the coating batch	In-process

(a) When the coating is applied with a mechanised process that is controlled compared to a completely manual application (in the field for example), electrical non-porosity may be monitored periodically as defined by the manufacturer and not during batch release.

During periodic monitoring (PVT)

Characteristics	DN and hose type to be tested	Paragraph of CCH2006-01 specifying the corresponding test	Minimum number of samples per test	Minimum test frequency	Monitoring type
Burst	All DNs of each type	§ 7.4.1 (*1*)	3	Max. every 3 years	Process
Elongation	All DNs for FCP and FCD	§ 7.4.2 (*2*)	3	Max. every 3 years	Process
Bending		§ 7.4.3 (*3*)	3	Max. every 3 years	Process
Cyclic fatigue		§ 7.4.4 (*3*)	3	Max. every 5 years	Process
Mechanical strength	All DNs for FCC	Annex 2 of CCH *(3)*	3	Max. every 5 years	Process

(1) (2) (3) see § D for the special testing conditions

D- Special testing conditions

(1) **For the burst tests** performed by the manufacturer, it is not necessary to make the 20 steps to reach the test pressure; only the following 5 steps are required (3PRM - 3.25PRM - 3.5PRM - 3.75PRM - 4PRM). In the event of a dispute, CCH2006-01 shall apply.

(2) **For the elongation tests** performed by the manufacturer, the pressure holding time of 1 hour may be decreased; but in the event of dispute, CCH2006-01 shall apply.

(3) **For bending, cyclic fatigue and mechanical strength tests:**

In order to monitor the change in the tubing performance level, it is recommended to conduct tests beyond the acceptance thresholds set out in CCH2006-01:

- either until failure;
- or at least with a coefficient:
  - 3 times the threshold required for bending, that is, 30 cycles;
  - 1.3 times the respective required thresholds for cyclic fatigue and mechanical strength (i.e. 13,000 cycles for cyclic fatigue and 1,300 cycles for mechanical strength).

(4) **For the FC monitoring frequency:**
When a product family (FCP, FCD or FCC) is reduced to 1 certified product, the monitoring frequency is of 1 every 2 years instead of 1 per year.

Note: points (1) and (2) were taken into account in the March 2015 version of CCH 2006-01.