CERTIFICATE

Reg. Number	18029 - M	Valid From	2020-05-18
First issue date	2014-02-21	Last change date	2020-05-18
Valid until	2023-05-20		
Previous expiry date			

Quality Management System Certificate

ISO 13485:2016

Digitally signed by Captari Vladimir
Date: 2022.08.09 12:48:50 EEST
Reason: MoldSign Signature
Location: Moldova

We certify that the Quality Management System of the Organization:

LANDANGER S.A.

Is in compliance with the standard UNI CEI EN ISO 13485:2016 for the following products/services:

Design management, production management of active and non active surgical instruments and endoscopy instruments. Design and production management for Class I non active surgical instruments, endoscopy instruments and containers for sterilization. Distribution of surgical instruments, endoscopy instruments and container for sterilization.

Chief Operating Officer
Giampiero Belcredi

The maintaining of certification is subject to annual surveillance and dependent upon the observance of Kiwa Cermet Italia contractual requirements.

The date of issuance of this certificate is the date of first issue by another accredited body
This certificate is composed of 1 page.

Kiwa Cermet Italia S.p.A.
Società con socio unico, soggetta all'attività di direzione e coordinamento di Kiwa Italia Holding Srl
Via Cadriano, 23
40057 Granarolo dell'Emilia (BO)
Tel +39.051.459.3.111
Fax +39.051.763.382
E-mail: info@kiwacermet.it
www.kiwa.it

LANDANGER S.A.
Registered Headquarters
- 217-219 Rue du Faubourg Saint Honoré 75008 Paris France

Certified Sites
- Z.I. La vendue 52000 Chaumont France

SGQ N° 007A

CERTIFICATE

Reg. Numero / *Reg. Number*	MED 31590	Revisione / *Revision*	0
Primo rilascio / *First issue date*	2020-07-09	Valido da / *Valid from*	2020-07-09
Scadenza / *Valid until*	2024-05-26	Ultima modifica / *Last change date*	2020-07-09

Certificato CE del Sistema di Garanzia della Qualità
EC Quality Assurance System Certificate

Si certifica che, sulla base dei risultati degli audit effettuati, il Sistema completo di garanzia di Qualità dell'Organizzazione/ *We certify that, on the basis of the audits carried out, the full Quality Assurance System of the Organization:*

LANDANGER S.A.

Sede Operativa / *Operative Site:*
Z.I. La vendue
52000 Chaumont - Francia

Sede Legale / *Legal Site*
217-219 Rue du Faubourg Saint Honoré
75008 Paris - Francia

è conforme ai requisiti applicabili della Direttiva 93/42/CEE e successive modifiche ed integrazioni, Allegato II escluso il pto 4, attuata in Italia con Dlgs. 46 del 1997/02/24 e successive modifiche ed integrazioni per le seguenti tipologie di Dispositivi Medici/ *Is in compliance with the applicable requirements of 93/42/EEC Directive as amended, Annex II without point 4, transposed in Italy by Dlgs. 46 of 1997/02/24 as amended for the following Medical Devices:*

Accessories for surgical instruments
Active surgical instruments
Anti-fog solution for endoscope
Bipolar instruments for surgery
Endoscopic instruments for uro-gynecology
Monopolar instrument for surgery
Non active surgical instruments
Suction devices
Suction-irrigation devices

Kiwa Cermet Italia S.p.A.
Società con socio unico, soggetta all'attività di direzione e coordinamento di Kiwa Italia Holding S.r.l.
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Fax +39.051.763.382
E-mail: info@kiwacermet.it
www.kiwacermet.it

Rif. rapporto di audit/ *Ref. audit report:* del/dated 08-09-10/04/2020

Rif. analisi documentazione tecnica/ *Ref. technical documentation analysis:* del/dated 18/06/2019, 23/01/2020, 14/02/2020

Chief Operating Officer
Giampiero Belcredi

Firmato digitalmente da:BELCREDI GIAMPIERO
Data:10/07/2020 08:45:44

CE
Organismo Notificato n. 0476
Notified Body nr. 0476

CERMET

CERTIFICATE

Reg. Numero / *Reg. Number*	MED 31590	Revisione / *Revision*	0
Primo rilascio / *First issue date*	2020-07-09	Valido da / *Valid from*	2020-07-09
Scadenza / *Valid until*	2024-05-26	Ultima modifica / *Last change date*	2020-07-09

Allegato tecnico al Certificato/
Technical sheet enclosed to the Certificate

Identificazione dei Dispositivi Medici/ *Identification of Medical Devices:*

Tipologia / *Medical Devices:*
Accessories for surgical instruments

Classe di rischio / *Risk class:*
I s - Limitatamente agli aspetti relativi al mantenimento della sterilità / restricted to the aspects concerned the maintenance of sterile conditions
Codice NANDO / *NANDO codes:*
MD 0106, MDS 7006 Ethylene oxide gas sterilization (EOG)

Modello / Model:

Camera Sleeve

Tipologia / *Medical Devices:*
Active surgical instruments

Classe di rischio / *Risk class:*
II b
Codice NANDO / *NANDO codes:*
MD 1104

Modello / Model:

Active Sheath

Tipologia / *Medical Devices:*
Anti-fog solution for endoscope

Classe di rischio / *Risk class:*
II a
Codice NANDO / *NANDO codes:*
MD 0108, MDS 7006 Radiation

Modello / Model:

Anti-fog solution 5 ml with sponge

Kiwa Cermet Italia S.p.A.
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Chief Operating Officer
Giampiero Belcredi

Firmato digitalmente da:BELCREDI GIAMPIERO
Data:10/07/2020 08:46:03

Organismo Notificato n. 0476
Notified Body nr. 0476

CERTIFICATE

Reg. Numero / *Reg. Number*	MED 31590	Revisione / *Revision*	0
Primo rilascio / *First issue date*	2020-07-09	Valido da / *Valid from*	2020-07-09
Scadenza / *Valid until*	2024-05-26	Ultima modifica / *Last change date*	2020-07-09

Allegato tecnico al Certificato/
Technical sheet enclosed to the Certificate

Identificazione dei Dispositivi Medici/ *Identification of Medical Devices:*

Tipologia / *Medical Devices:*
Bipolar instruments for surgery

Classe di rischio / *Risk class:*
II a

Codice NANDO / *NANDO codes:*
MD 1104

Modello / Model:

Reusable working elements for bipolar instruments

Classe di rischio / *Risk class:*
II b

Codice NANDO / *NANDO codes:*
MD 0106

Modello / Model:

Reusable accessories for bipolar instruments

Codice NANDO / *NANDO codes:*
MD 1104

Modello / Model:

Reusable surgical instrument for endoscopy and open surgery

Codice NANDO / *NANDO codes:*
MD 1104, MDS 7006 Ethylene oxide gas sterilization (EOG)

Modello / Model:

Disposable bipolar instrument for endoscopy

Tipologia / *Medical Devices:*
Endoscopic instruments for uro-gynecology

Classe di rischio / *Risk class:*
II a

Codice NANDO / *NANDO codes:*
MD 0106

Modello / Model:

Reusable albarran deflector

Kiwa Cermet Italia S.p.A.
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Chief Operating Officer
Giampiero Belcredi

Firmato digitalmente da:BELCREDI GIAMPIERO
Data:10/07/2020 08:46:22

CERMET

CE

Organismo Notificato n. 0476
Notified Body nr. 0476

Reg. Numero / *Reg. Number*	MED 31590	Revisione / *Revision*	0
Primo rilascio / *First issue date*	2020-07-09	Valido da / *Valid from*	2020-07-09
Scadenza / *Valid until*	2024-05-26	Ultima modifica / *Last change date*	2020-07-09

CERTIFICATE

Allegato tecnico al Certificato/
Technical sheet enclosed to the Certificate

Identificazione dei Dispositivi Medici/ *Identification of Medical Devices:*

Tipologia / *Medical Devices:*
Endoscopic instruments for uro-gynecology

Modello / Model:

Reusable cystoscope sheath

Modello / Model:

Reusable guide tube for continuous irrigation

Modello / Model:

Reusable resectoscope sheath

Modello / Model:

Reusable urethrotome sheath

Tipologia / *Medical Devices:*
Monopolar instrument for surgery

Classe di rischio / *Risk class:*
II a

Codice NANDO / *NANDO codes:*
MD 0106

Modello / Model:

Non active reusable accessory for monopolar surgical instruments

Codice NANDO / *NANDO codes:*
MD 0106, MDS 7006 Ethylene oxide gas sterilization (EOG)

Modello / Model:

Non active disposable accessory for monopolar surgical instruments

Classe di rischio / *Risk class:*
II b

Codice NANDO / *NANDO codes:*
MD 1104

Modello / Model:

Active accessories for monopolar instruments

Modello / Model:

Monopolar active surgical instruments

Chief Operating Officer
Giampiero Belcredi

Firmato digitalmente da:BELCREDI GIAMPIERO
Data:10/07/2020 08:46:44

Kiwa Cermet Italia S.p.A.
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Organismo Notificato n. 0476
Notified Body nr. 0476

Reg. Numero / *Reg. Number*	MED 31590	Revisione / *Revision*	0
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CERTIFICATE

Allegato tecnico al Certificato/
Technical sheet enclosed to the Certificate

Identificazione dei Dispositivi Medici/ *Identification of Medical Devices:*

Tipologia / *Medical Devices:*
Monopolar instrument for surgery

Codice NANDO / *NANDO codes:*
MD 1104, MDS 7006 Ethylene oxide gas sterilization (EOG)

Modello / Model:

Disposable active accessories for monopolar instruments

Modello / Model:

Disposable monopolar active surgical instruments

Tipologia / *Medical Devices:*
Non active surgical instruments

Classe di rischio / *Risk class:*
I s - Limitatamente agli aspetti relativi al mantenimento della sterilità / restricted to the aspects concerned the maintenance of sterile conditions

Codice NANDO / *NANDO codes:*
MD 0106, MDS 7006 Ethylene oxide gas sterilization (EOG)

Modello / Model:

Smoke evacuator

Classe di rischio / *Risk class:*
II a

Codice NANDO / *NANDO codes:*
MD 0102, MDS 7006 Ethylene oxide gas sterilization (EOG)

Modello / Model:

Insufflation needle

Codice NANDO / *NANDO codes:*
MD 0106

Modello / Model:

Non active reusable Trocar and Sheath

Modello / Model:

Reusable Veres needle

Codice NANDO / *NANDO codes:*
MD 0106, MDS 7006 Ethylene oxide gas sterilization (EOG)

Chief Operating Officer
Giampiero Belcredi

Firmato digitalmente da:BELCREDI GIAMPIERO
Data:10/07/2020 08:47:12

Kiwa Cermet Italia S.p.A.
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CERMET

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Organismo Notificato n. 0476
Notified Body nr. 0476

CERTIFICATE

Allegato tecnico al Certificato/
Technical sheet enclosed to the Certificate

Identificazione dei Dispositivi Medici/ *Identification of Medical Devices:*

Tipologia / *Medical Devices:*
Non active surgical instruments

Modello / Model:
Insufflation tubing

Modello / Model:
Non active single use Trocar and Sheath

Modello / Model:
Retrieval bag

Modello / Model:
Wound Retractor

Tipologia / *Medical Devices:*
Suction devices

Classe di rischio / *Risk class:*
II a

Codice NANDO / *NANDO codes:*
MD 0106

Modello / Model:
Reusable suction tubes for open surgery

Codice NANDO / *NANDO codes:*
MD 0106, MDS 7006 Ethylene oxide gas sterilization (EOG)

Modello / Model:
Disposable suction tubes for open surgery

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Chief Operating Officer
Giampiero Belcredi
Firmato digitalmente da:BELCREDI GIAMPIERO
Data:10/07/2020 08:47:37

CERMET

CE
Organismo Notificato n. 0476
Notified Body nr. 0476

CERTIFICATE

Reg. Numero / *Reg. Number*	MED 31590	Revisione / *Revision*	0
Primo rilascio / *First issue date*	2020-07-09	Valido da / *Valid from*	2020-07-09
Scadenza / *Valid until*	2024-05-26	Ultima modifica / *Last change date*	2020-07-09

Allegato tecnico al Certificato/
Technical sheet enclosed to the Certificate

Identificazione dei Dispositivi Medici/ *Identification of Medical Devices:*

Tipologia / *Medical Devices:*
Suction-irrigation devices

Classe di rischio / *Risk class:*
II a

Codice NANDO / *NANDO codes:*
MD 0106

Modello / Model:

Reusable cannulae

Modello / Model:

Reusable endoscopic suction-irrigation devices

Codice NANDO / *NANDO codes:*
MD 0106, MDS 7006 Ethylene oxide gas sterilization (EOG)

Modello / Model:

Disposable endoscopic suction-irrigation devices

La lista completa dei codici, relativi ai modelli certificati, è disponibile presso Kiwa Cermet Italia./ *The complete list of the codes related to the certificated models is available at Kiwa Cermet Italia.* Il presente Certificato è soggetto al rispetto dei requisiti contrattuali di Kiwa Cermet Italia ed è valido solo per le tipologie di dispositivi sopra identificate soggette a sorveglianza/ *This Certificate is subject to Kiwa Cermet Italia regulations and it is valid only for the above mentioned Medical Devices that are subject to survey.* L'allegato tecnico è parte integrante del presente Certificato./ *The technical sheet is an integrating part of this Certificate.*

Kiwa Cermet Italia S.p.A.
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all'attività di direzione e coordinamento
di Kiwa Italia Holding S.r.l.
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Chief Operating Officer
Giampiero Belcredi

Firmato digitalmente da:BELCREDI GIAMPIERO
Data:10/07/2020 08:48:00

Organismo Notificato n. 0476
Notified Body nr. 0476

DECLARATION DE CONFORMITE

CE

DECLARATION OF CONFORMITY

Nous, Société / *We, Company* **LANDANGER**
Adresse de contact / *Contact address*: **ZI la Vendue, 52000 Chaumont – France**
Tél. : **03 25 02 10 10 – Fax : 03 25 02 10 20**
E-mail : **landanger@landanger.com**
Siège social / *Registered place of business*: **217-219 rue du faubourg Saint Honoré, 75008 Paris - France**

EN TANT QUE FABRICANT, DÉCLARONS SOUS NOTRE PROPRE RESPONSABILITE QUE LES DISPOSITIFS MÉDICAUX :
AS MANUFACTURER, HEREBY DECLARE UNDER OUR SOLE RESPONSIBILITY THAT THE MEDICAL DEVICES:

« Accessories for surgical instruments
Active surgical instruments
Anti-fog solution for endoscope
Bipolar instruments for surgery
Endoscopic instruments for uro-gynecology
Monopolar instrument for surgery
Non active surgical instruments
Suction devices
Suction-irrigation devices.»
CLASSE Is, IIa et IIb
Voir liste jointe de 31 pages en annexe / see 31 pages enclosed list

- ✓ Sont conformes au certificat KIWA Cermet Italia SpA – Via Cadriano, 23 – 40057 Granarolo dell'Emilia (BP) - Italia, CE 0476 n° MED 31590. délivrée le 10 JUILLET 2020.
  They are complying with the certificate KIWA Cermet Italia SpA – Via Cadriano, 23 – 40057 Granarolo dell'Emilia (BP) - Italia, CE 0476 n° MED 31590 delivered on July 10th 2020 .
- ✓ Ne sont pas fabriqués à partir de tissus d'origine animale tels que visés dans le règlement européen 722/2012.
  Are not made from animal tissues as directed in the European Regulation 722/2012.
- ✓ Ne contiennent pas de substances dérivées du sang humain tels que visées à la Directive Européenne 93/42/CEE.
  Do not contain substances produced from human blood as directed in the European Directive 93/42/CEE.
- ✓ Satisfont aux dispositions du livre II du code de la santé publique.
  They satisfy the arrangements of the public heath book II.

Sont conformes à la Directive Européenne 93/42/CEE, et ses amendements, sur les dispositifs médicaux Annexe II (point 3) et appartiennent à la classe **Is, IIa et IIb**.
Are complying with the European Directive 93/42/CEE, and its amemdments, concerning medical devices Appendix II (point 3) and belong to class **Is, IIa** *and* ***IIb.***

☞ De ce fait, je m'estime remplir les obligations des exigences essentielles selon l'Annexe I.
Consenquently, I commit myself to meet all the essential requirements obligations according to Appendix I.
Chaumont, le *10 JUILLET 2020*

Le Directeur d'établissement,
Director
Didier DEBLAIZE

LANDANGER

L A N D A N G E R

Déclaration de conformité
Declaration of conformity

Déclaration de conformité
Declaration of conformity

CE

Nous, Société / *We, Company* **LANDANGER**
Adresse de contact / *Contact address*: **ZI la Vendue, 52000 Chaumont – France**
Tél. : **03 25 02 10 10 – Fax : 03 25 02 10 20**
E-mail : **landanger@landanger.com**
Siège social / *Registered place of business*: **217-219 rue du faubourg Saint Honoré, 75008 Paris - France**
Enregistré sous le numéro / *Registered under the number*: **SRN: FR-MF-000000468**

EN TANT QUE FABRICANT, DÉCLARONS SOUS NOTRE PROPRE RESPONSABILITE QUE LES DISPOSITIFS MÉDICAUX :
AS MANUFACTURER, HEREBY DECLARE UNDER OUR SOLE RESPONSIBILITY THAT THE MEDICAL DEVICES:

Gamme : Instrumentation Endoscopique
Range :Endoscopic instrumentation

Voir liste jointe de 64 pages en annexe du 25/05/2021 / See 64 pages enclosed list from the 25/05/2021.

- ✓ Sont conformes à la Directive Européenne 93/42/CEE, et ses amendements, sur les dispositifs médicaux et appartiennent à la classe **I**.
  *Are complying with the European Directive 93/42/CEE, and its amendments, concerning medical devices **I**.*
- ✓ Ne sont pas fabriqués à partir de tissus d'origine animale tels que visés dans le règlement européen 722/2012.
  Are not made from animal tissues as directed in the European Regulation 722/2012.
- ✓ Ne contiennent pas de substances dérivées du sang humain tels que visées à la Directive Européenne 93/42/CEE.
  Do not contain substances produced from human blood as directed in the European Directive 93/42/CEE.
- ✓ Satisfont aux dispositions du livre II du code de la santé publique.
  They satisfy the arrangements of the public heath book II.
- ☞ De ce fait, je m'estime remplir les obligations des exigences essentielles selon l'Annexe I.
  Consequently, I consider myself to meet all the essential requirements obligations according to Appendix I.

Chaumont, le 25/05/2021

Le Directeur d'établissement,
Managing Director
Didier Deblaize

L A N D A N G E R

Déclaration de conformité
Declaration of conformity

Déclaration de conformité
Declaration of conformity

CE

Nous, Société / *We, Company* **LANDANGER**
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Enregistré sous le numéro / *Registered under the number*: **SRN: FR-MF-000000468**

EN TANT QUE FABRICANT, DÉCLARONS SOUS NOTRE PROPRE RESPONSABILITE QUE LES DISPOSITIFS MÉDICAUX :
AS MANUFACTURER, HEREBY DECLARE UNDER OUR SOLE RESPONSIBILITY THAT THE MEDICAL DEVICES:

Gamme : Instrumentation générale
Range :General instrumentation

Voir liste jointe de 278 pages en annexe du 25/05/2021 / See 278 pages enclosed list from the 25/05/2021.

- ✓ Sont conformes à la Directive Européenne 93/42/CEE, et ses amendements, sur les dispositifs médicaux et appartiennent à la classe **I**.
  Are complying with the European Directive 93/42/CEE, and its amendments, concerning medical devices I.
- ✓ Ne sont pas fabriqués à partir de tissus d'origine animale tels que visés dans le règlement européen 722/2012.
  Are not made from animal tissues as directed in the European Regulation 722/2012.
- ✓ Ne contiennent pas de substances dérivées du sang humain tels que visées à la Directive Européenne 93/42/CEE.
  Do not contain substances produced from human blood as directed in the European Directive 93/42/CEE.
- ✓ Satisfont aux dispositions du livre II du code de la santé publique.
  They satisfy the arrangements of the public heath book II.
- ☞ De ce fait, je m'estime remplir les obligations des exigences essentielles selon l'Annexe I.
  Consequently, I consider myself to meet all the essential requirements obligations according to Appendix I.

Chaumont, le 25/05/2021

Le Directeur d'établissement,
Managing Director
Didier Deblaize

L A N D A N G E R

LANDANGER
TECHNOLOGIE POUR LA SANTÉ

CERTIFICAT DE CONFORMITE

Certificate of conformity

1 / ACIERS INOXYDABLES MARTENSITIQUE

Martensitic stainless steel

1.1, Pour les instruments à forte pression et ressort.

For instruments with strong spring effect

On utilise généralement du

X10Cr13 / 1.4006

X:	Acier inoxydable fortement	allié
10 :	0.10 % de carbone	
Cr:	chrome	
13 :	13 % de chrome	

X20Cr13 / 1.4021

X:	Acier inoxydable fortement	allié
20 :	0.20 % de carbone	
Cr:	chrome	
13 :	13 % de chrome	

X30Cr13 / 1.4028

X:	Acier inoxydable fortement	allié
30 :	0.30 % de carbone	
Cr:	chrome	
13 :	13 % de chrome	

Ces aciers permettent d'obtenir une gamme étendue de caractéristiques mécaniques et une bonne résistance à la corrosion :

Trempe à 1015° C…….HRC : 48
Revenu à 270° C …….HRC : 46

We usually use

X10Cr13 / 1.4006

X:	*Stainless steel strongly allied*	
10 :	*0.10 % carbon rate*	
Cr:	*chromium*	
13 :	*13 % chromium rate*	

X20Cr13 / 1.4021

X:	*Stainless steel strongly allied*	
20 :	*0.20 % carbon rate*	
Cr:	*chromium*	
13 :	*13 % chromium rate*	

X30Cr13 / 1.4028

X:	*Stainless steel strongly allied*	
30 :	*0.30 % carbon rate*	
Cr:	*chromium*	
13 :	*13 % chromium rate*	

These steels allows a wide range of mechanical characteristics and a good rust resistance :

Quenching at 1015° C…….HRC : 48
Tempering at 270° C …….HRC : 46

1.2, Pour les instruments coupants :

For Cuting Instruments

- Le pourcentage de carbone est plus élevé, ce qui entraîne une dureté plus élevée, nécessaire à la coupe.
- On utilise du

X38CrMoV15 / 1.4117

X:	Acier inoxydable fortement	allié
38 :	0.38 % de carbone	
Cr:	chrome	
Mo:	Molybdène	
V:	Vanadium	
15 :	15 % de chrome	

- Percentage of carbon is higher, conducting to superior hardness needed to cut.

- We use

X38CrMoV15 / 1.4117

X:	*Stainless steel strongly allied*	
38 :	*0.38 % carbon rate*	
Cr:	*chromium*	
Mo:	*Molybdenum*	
V:	*Vanadium*	
15 :	*15 % chromium rate*	

X39Cr13 / 1.4031

X: Acier inoxydable fortement allié
39 : 0.39 % de carbone
Cr: chrome
13 : 13 % de chrome

X39Cr13 / 1.4031

X: Stainless steel strongly allied
39 : 0.39 % carbon rate
Cr: chromium
13 : 13 % chromium rate

X40CrMoVN16-2 / 1.4123

X: Acier inoxydable fortement allié
40 : 0.40 % de carbone
Mo: Molybdène
V: Vanadium
16 % de chrome
2% de Molybdène
< 1,5% de Vanadium

X40CrMoVn16-2 / 1.4123

X: Stainless steel strongly allied
40 : 0.40 % carbon rate
Mo: Molybdenum
V: Vanadium
16 % chromium rate
2% Molybdenum rate
< 1,5% Vanadium rate

X46Cr13 / 1.4034

X: Acier inoxydable fortement allié
46 : 0.46 % de carbone
Cr: chrome
13 : 13 % de chrome

Trempe à 1050° C……..HRC : 53
Revenu à 280° C……HRC : 50

Le taux de carbone étant plus élevé que pour les instruments à pression, pour maintenir l'inoxydabilité, le taux de chrome a soit été augmenté, soit on y a ajouté du Molybdène.

X46Cr13 / 1.4034

X: Stainless steel strongly allied
46 : 0.46 % carbon rate
Cr: chromium
13 : 13 % chromium rate

Quenching at 1050° C……...HRC : 53
Tempering at 280° C……..…HRC : 50

Carbone rate being higher then for punching instruments to maintain proper corrosion resistance, chromium rate is higher, or Molybdenum added.

2/ ACIERS INOXYDABLES AUSTENITIQUES
Austenitic stainless steel

Pour les instruments à fonction statique.
For Static instruments

Les nuances utilisées sont

Material Grade used it :

X2 CrNi 19-11 / 1.4306 ou 304L (norme USA)
Soit X : Acier inoxydable fortement allié
0.02 % de carbone
C : Chrome
N : Nickel
19 : 19 % de Chrome
11 : 11 % de Nickel

X2 CrNi 19-11 *or 304L (US norm)*
with X : Stainless steel strongly allied
0.02 % carbone rate
C : Chromium
N : Nickel
19 : 19 % Chromium rate
11 : 11 % Nickel rate

X5 CrNi 18-10 / 1.4301 ou 304 (norme USA)
Soit X : Acier inoxydable fortement allié
0.05 % de carbone
C : Chrome
N : Nickel
18 : 18 % de Chrome
10 : 10 % de Nickel

X5 CrNi 18-10 *or 304 (US norm)*
with X : Stainless steel strongly allied
0.05 % carbone rate
C : Chromium
N : Nickel
18 : 18 % Chromium rate
10 : 10 % Nickel rate

3/ TUNGSTENE
TUNGSTEN

Les nuances utilisées sont

WC-CO – K15/K20
Soit W : Tungstène
45 % de Tungstène
C : Carbone
45 % de Carbone
Co : Cobalt
10 % de Cobalt

Material Grade used it :

***WC-CO** – K15/K20*
with W : Tungsten
45 % Tungsten rate
C : Carbone
45 % Carbon rate
Co : Cobalt
10 % Cobalt rate

4/ TITANE
TITANIUM

Les nuances utilisées sont

TA6V / Ti – 6Al – 4V
Soit Ti: Titane
< 0.08 % de carbone
6 : 6% d'aluminium
Al : Aluminium
4: 4 % de Vanadium
V : Vanadium

Material Grade used it :

TA6V / Ti – 6Al – 4V
with Ti: Titanium
< 0.08 % carbon rate
6 : 6% aluminium rate
Al : Aluminium
4: 4 % Vanadium rate
V : Vanadium

Chaumont le 27 JANVIER 2017

A GUILLAUMOT
Quality Manager