



global fastening
solutions



global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

COMPANY PHILOSOPHY

“QUALITY DOES NOT COME FROM THE THINGS THAT PEOPLE DO, BUT FROM THE PEOPLE WHO DO THEM”

- TARGET: To reach, in a profitable way, excellence in our service to customers.
- METHODS: To focus our efforts to assist and **improve our clients competitive positioning.**
- THE KEYS:
 - Human capital.
 - High quality products.
 - Clear dedication for customer service.



global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

COMPANY HISTORY

- In **1991**, was established the company named ESOL. [LOCAL SALES](#)
- In **1995**, sales were expanded to the whole country. [NATIONAL SALES](#)
- In **1996**, due to a change in shareholders, the company was renamed as **TSF**.
- In **1997**, was obtained the quality certification **ISO-9002**. Started exports to EU. [INTERNATIONAL SALES](#)
- In **2001**, move location to VW Suppliers Park in Navarra.
- In **2004**, **TSF** diversifies the activity to Windpower Industry.
- In **2009**, **TSF** started operations locally in [GERMANY](#).
- In **2010**, **TSF** started manufacturing operations in [SPAIN](#).
- In **2014**, **TSF** obtains **ISO-TS/16949** and expands to [MEXICO](#) together with local partner **JM**.
- In **2015**, **TSF MEXICO** started operations as local supplier.
- In **2016**, **TSF MEXICO** sets its own facility and headquarters at San Juan del Rio, Querétaro.
- In **2017**, **TSF** updates to **ISO 9001:2015** and **IATF 16949:2016**.
- In **2018**, **TSF MEXICO** is certified **ISO 9001:2015**.



global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

LOCATIONS



**VOLKSWAGEN
Suppliers Park
HQ & Logistic Center**

Área Industrial Arazuri
Calle B 11, 31170
Arazuri, Navarra (SPAIN)

Tel: +34 948 324420
Fax: +34 948 324388
Email: infoes@tsftsh.com



global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

LOCATIONS



**VOLKSWAGEN
Suppliers Park
Manufacturing Site**

Área Industrial Iperregui II
nº 43, 31160
Orcoyen, Navarra (SPAIN)

Tel: +34 948 324420
Fax: +34 948 324388
Email: infoes@tsftsh.com



global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

LOCATIONS



**VOLKSWAGEN
Suppliers Park
Packaging Site**

Área Industrial Arazuri
Calle C 17 y 19, 31170
Arazuri, Navarra (SPAIN)

Tel: +34 948 324420
Fax: +34 948 324388
Email: infoes@tsftsh.com



global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

LOCATIONS



NUEVO SAN JUAN

Norte 2 y 4, 76807,
San Juan del Río,
Querétaro (MEXICO)

Tel: +52 55-5082-0185
Fax: +52 55-5399-9294
Email: infomx@tsftsh.com

[VIDEO PRESENTATION](#)



global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

LOCATIONS



OBERNBURG AM MAIN

Johannes Obernburger Strasse
14, 63785 Obernburg
(GERMANY)

Tel: +49 6022-2655675

Fax: +49 6022-2655680

Mobil: +49 172-9716185

Email: infode@tsftsh.com



global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

FACILITIES

- PLANT: 14.000 m²
- OFFICE: 2.500 m²
- BUILDING: 12.000 m²
- STAFF: 50





global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

FACILITIES

- WAREHOUSE: 6.000 m²
- CAPACITY: 15.000 europallets



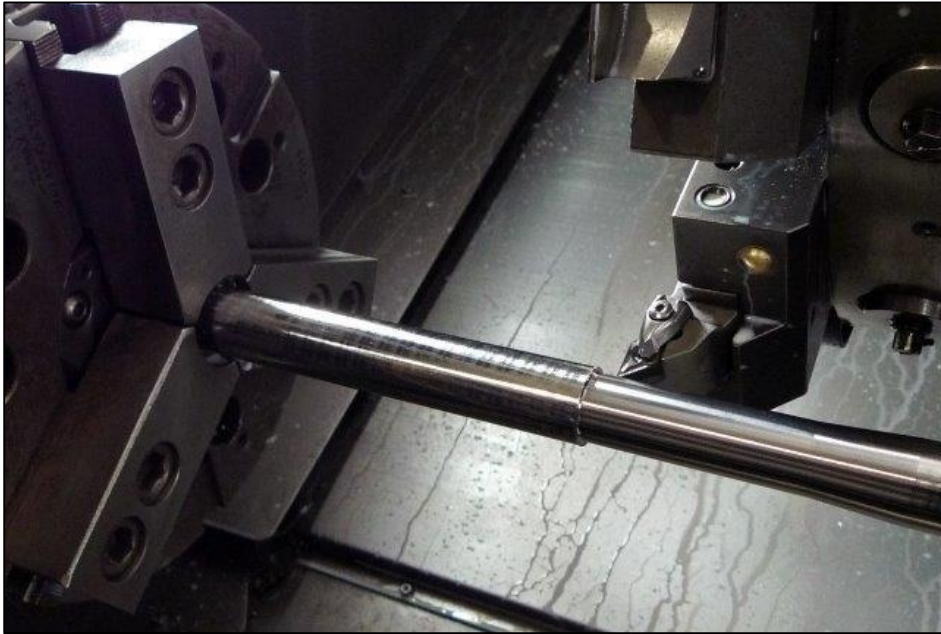


global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

FACILITIES

- FACTORY: 5.000 m²

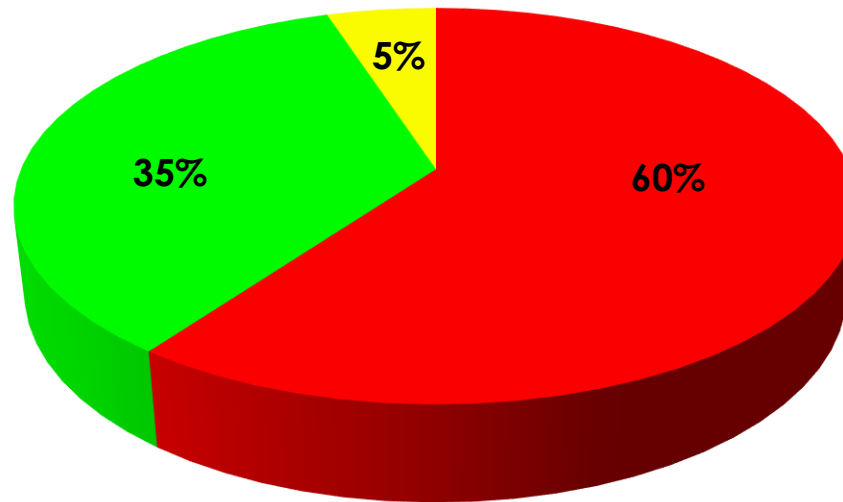
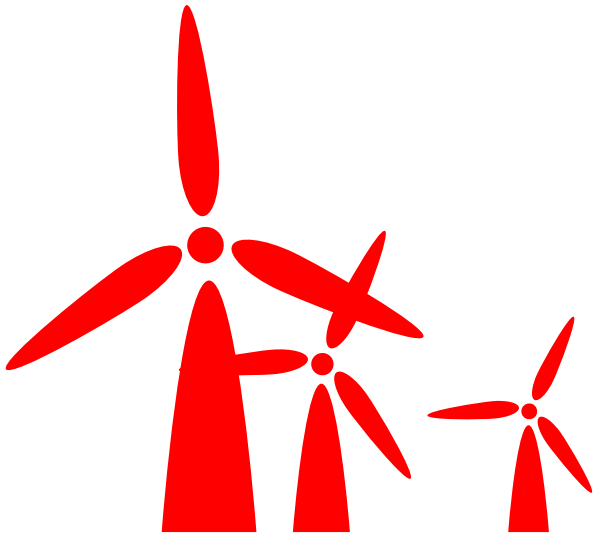




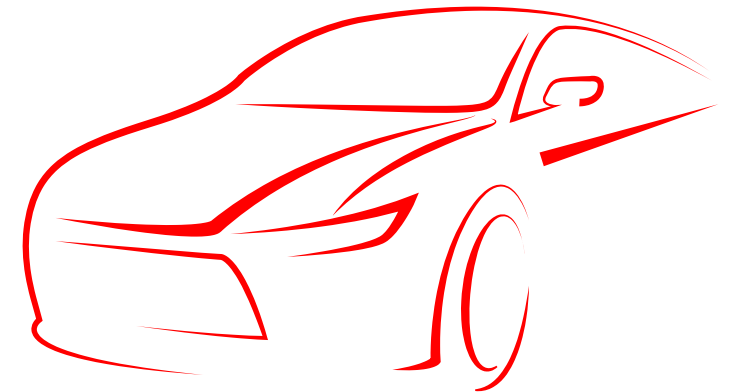
global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

SECTORS



■ Automotive ■ Windpower ■ Others

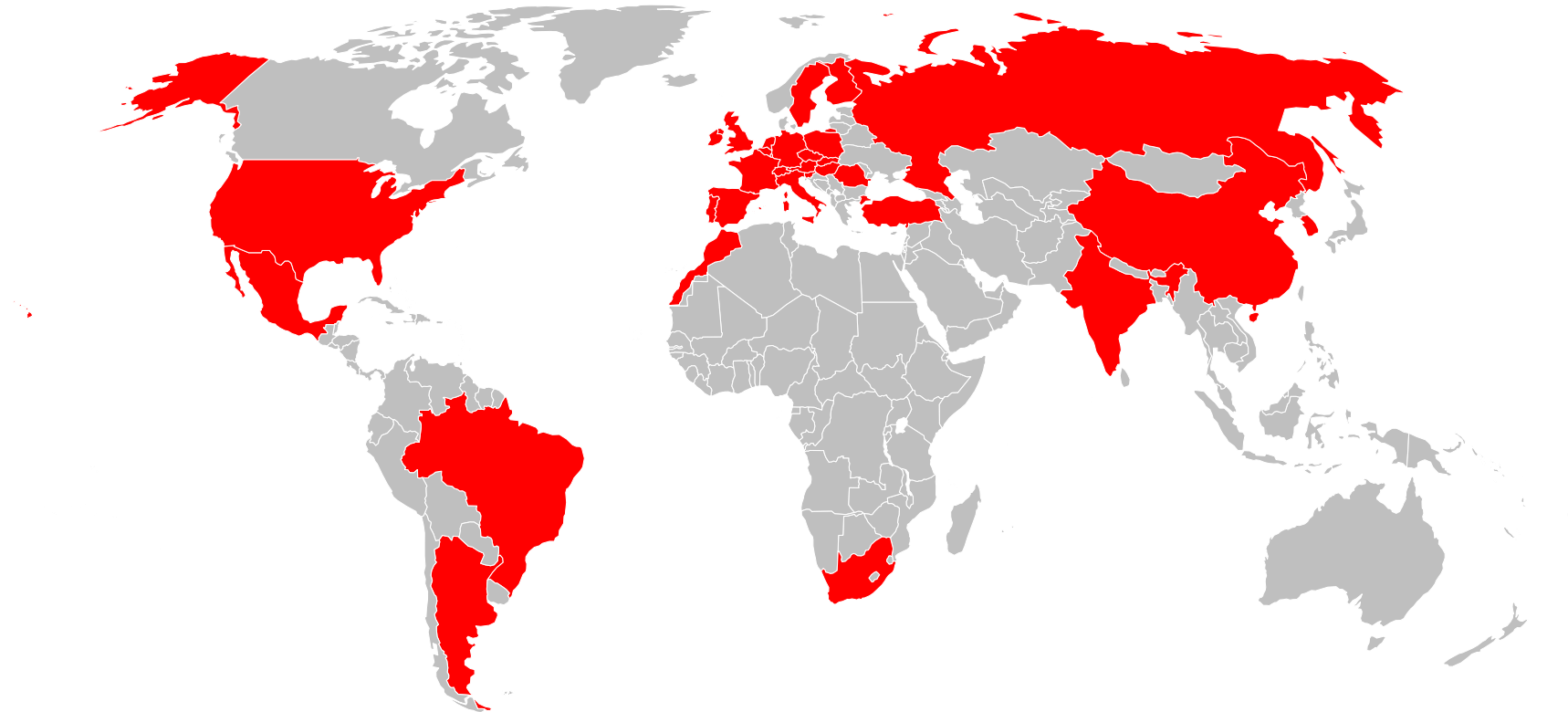




global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

EXPORT SALES



- To more than 20 countries: USA, Brasil, Turkey, India, Hungary, Russia...



global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

QUALITY

- **TSF** is certified ISO 9001-2015 and IATF-16949.
- Our direct partners are also certified by ISO 9001; IATF 16949; VDA; QS9000...
- 0 defect objective and continuous improvement of our processes.



Certificate of Approval

This is to certify that the Management System of:

Navarra de Técnicas de Soldadura y Fijación, S.L.
(TSF SL)

Área Industrial Arazuri-Orcyoen, C/ B nº 11, 31170 Arazuri, Navarra, Spain

has been approved by LRQA to the following standards:

ISO 9001:2015

Gilles Bessiere - Area Technical Manager

Issued by: Lloyd's Register Quality Assurance España, S.L.U.

for and on behalf of: Lloyd's Register Quality Assurance Limited

This certificate is valid only in association with the certificate schedule bearing the same number on which the locations applicable to this approval are listed.

Current issue date: 30 November 2018

Expiry date: 29 November 2021

Certificate identity number: 10154930

Original approval(s):

ISO 9001 – 24 October 2000

Approval number(s): ISO 9001 – 0034851

The scope of this approval is applicable to:

Manufacture, provision and supply of hardware and fixing parts following customer's specification or design.



Lloyd's Register Group Limited, its affiliates and subsidiaries, including Lloyd's Register Quality Assurance Limited (LRQA), and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or for any other reason, whether the information or advice is correct or not. This document is issued by Lloyd's Register Group Limited, a company registered in England and Wales, company number 20283868. Registered office: 25 Abchurch Lane, London EC4N 3DF, United Kingdom.

Page 1 of 2



Certificate of Approval

This is to certify that the Management System of:

Navarra de Técnicas de Soldadura y Fijación, S.L.
(TSF SL)

Polígono Industrial Iperlegui II, nº 43, 31160 Orcyoen, Navarra, Spain

has been approved by LRQA to the following standards:

IATF 16949:2016
(Excluding product design)

Gilles Bessiere - Area Technical Manager

Issued by: Lloyd's Register Quality Assurance España, S.L.U.

for and on behalf of: Lloyd's Register Quality Assurance Limited

This certificate is valid only in association with the certificate schedule bearing the same number on which the locations applicable to this approval are listed.

Certification date: 30 November 2018

Expiry date: 29 November 2021

Certificate number: 10155103

IATF Certificate number: 0344618

Approval number(s): IATF 16949 – 0034852

The scope of this approval is applicable to:

Manufacture of machined parts according to standard or to customer design.



Lloyd's Register Group Limited, its affiliates and subsidiaries, including Lloyd's Register Quality Assurance Limited (LRQA), and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or for any other reason, whether the information or advice is correct or not. This document is issued by Lloyd's Register Group Limited, a company registered in England and Wales, company number 20283868. Registered office: 25 Abchurch Lane, London EC4N 3DF, United Kingdom.

Page 1 of 2



global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

SERVICES

- Advanced Product Quality Planning (APQP) for manufacturing goods and Production Part Approval Process (PPAP) documentation provided.
- Purchase management, logistic warehousing, [security stocks...](#)
- Delivery of goods according to each customers requirement: [JIT](#), [Kanban](#), [Consignment](#), [etc...](#)
- Analysis of needs and improvement studies.
- A large level of stock enables us to give an immediate response to our customers needs.

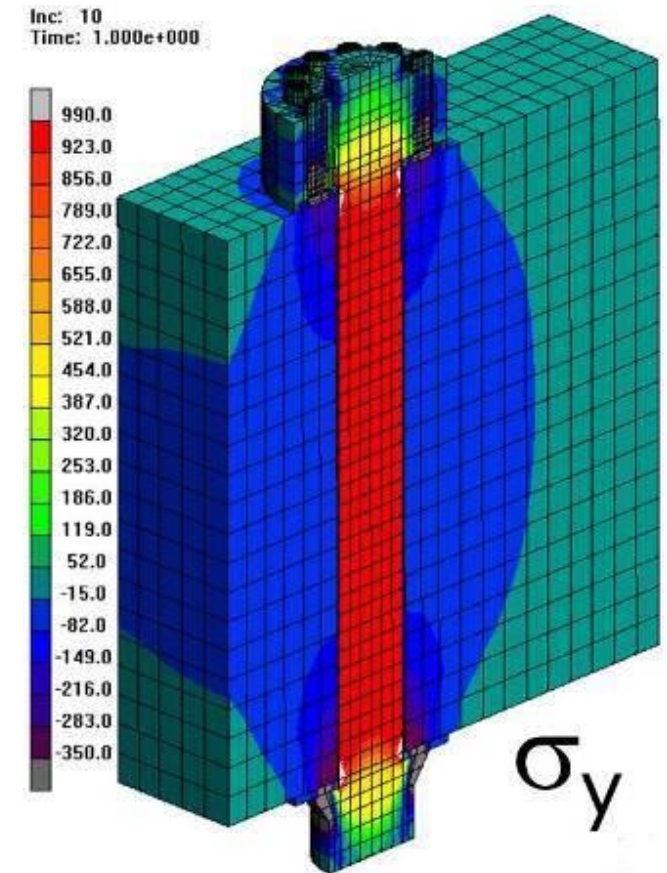


global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

ENGINEERING

- From our Engineering Department we can provide the study and development of bolted joints for all sectors.
- For joints calculation, TSF uses the prestigious and powerful finite element simulation utility MSC. MARC.





global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

MANUFACTURING

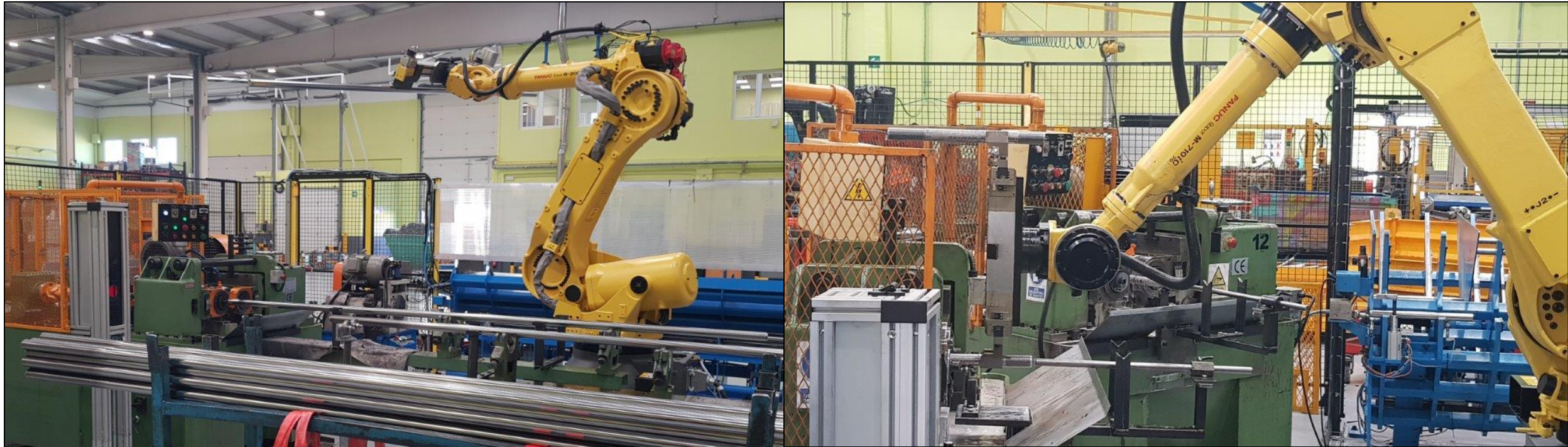




global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

MANUFACTURING





global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

TRACEABILITY

- We provide **Integral Traceability** for all the kits and parts with any customer required type of identification.
- An optimum management of traceable materials brings to our customers considerable costs and resources reduction through the identification and follow up of any lot or piece from the raw material stage up to the product finally delivered.

| | | | |
|------------------------|----------------------------|--------------------------------|-------------------|
| TSF Formato cliente | | Fecha: 19/01/2009 Página: 1 | |
| MAQUINA: MONTAJE DE... | | O.F.: 9001334 | Nº PALET: 16 - 20 |
| | | FECHA ALB. | Nº ALBARAN: |
| Referencia | Descripción | Cantil | Embalado |
| 9001334/16 | | | |
| 9011883225 | 901 M30X235 C10.9 DACROMET | 40.00 | 5130 |
| 90118830110 | 901 30X110 88 DACROMET | 6.00 | 861591 |
| 90118836130 | 901 M30X130 C8.8 DACROMET | 4.00 | 47446 |
| 90118836150 | 901 36X150 8.8 DACROMET | 12.00 | 74536 |
| 90118836150 | 901 36X150 8.8 DACROMET | 4.00 | 74536 |
| 9001334/17 | | | |
| 9011883225 | 901 M30X235 C10.9 DACROMET | 40.00 | 5130 |
| 90118830110 | 901 30X110 88 DACROMET | 6.00 | 861591 |
| 90118836130 | 901 M30X130 C8.8 DACROMET | 4.00 | 47446 |
| 90118836150 | 901 36X150 8.8 DACROMET | 15.00 | 74536 |
| 90118836150 | 901 36X150 8.8 DACROMET | 1.00 | 74536 |
| 9001334/18 | | | |
| 9011883225 | 901 M30X235 C10.9 DACROMET | 20.00 | 24855 |
| 9011883225 | 901 M30X235 C10.9 DACROMET | 20.00 | 5130 |
| 90118830110 | 901 30X110 88 DACROMET | 6.00 | 863722 |
| 90118836130 | 901 M30X130 C8.8 DACROMET | 4.00 | 74536 |
| 90118836150 | 901 36X150 8.8 DACROMET | 16.00 | 37143 |

| | | | |
|---|--|----------------------------|--|
| TSF ARAZURI NAVARRA Tlfno. 34 948 324420 www.grupotsf.com | | O.F. 9001355/1 | |
| Nº REFERENCIA PROVEEDOR: GP0CRITIC | | | |
| | | | |
| DESCRIPCION TORNILLERIA CRITICA GP055433 | | CAJAS 1/1 | |
| Nº REFERENCIA | | UBICACIÓN: 491/ 1/ 1/ 1 | |
| | | | |

| | | | | |
|---|------------------|--------------|--|-------|
| T.S.F. | | 20227 | | |
| QTT. 800 | CONTAINER 100 | LOT 2MB06 | | |
| 30683065 | | 15 | | |
| DATE 13/01/2014 | | | | |
| STRUC1 | | UNIPR00102 | | |
| 2014000182 | | | | |
| 930W708425 TCA.SOLD.EXG.C/BRIDA M10 C10 s300 | | 182001 | | 03 |
| SERIAL NO. (S) | | 182001 | | 003 |
| | | LOT | | 2MB06 |

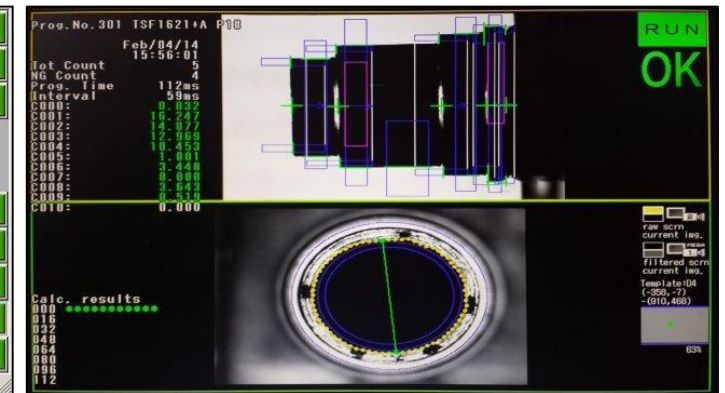
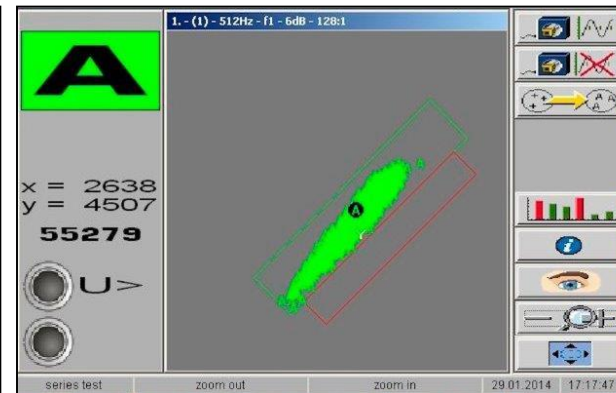
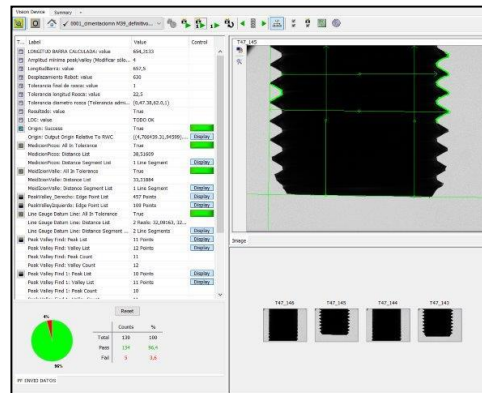
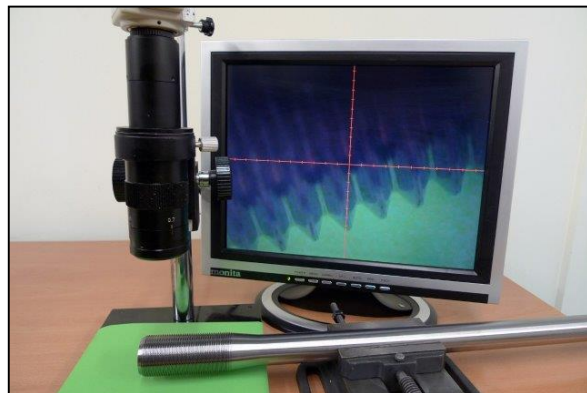
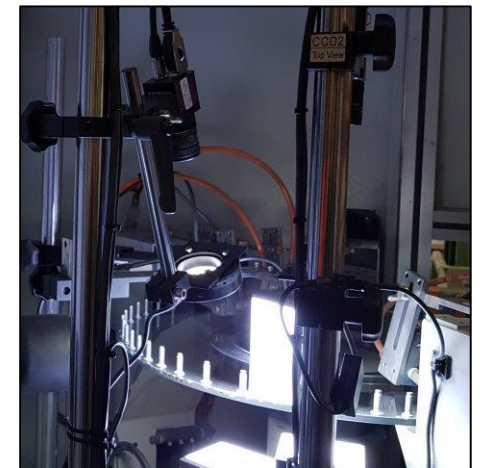
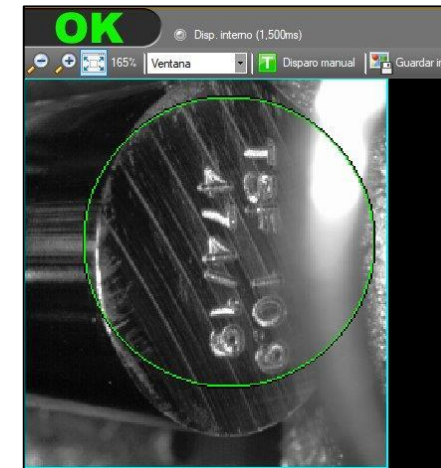


global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

INSPECTION

- Our fasteners can be provided with several unitary controls **Per Customer Request**.
- LASER LENS: for thread check.
- EDDY CURRENT: for heat treatment verification.
- OPTICAL SORTING: for dimensional checks.





global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

AUTOMOTIVE SECTOR

- Wide range of high technical cold forming and machined special parts.
- Delivery of **Initial Samples** with any customer specific PPAP documentation, **PSW, VDA, etc...**
- Fulfilment with **IMDS** and the **REACH** regulations.
- Process auditing services, **CQI-9 / CQI-11 / CQI-12, etc...**
- Compatibility with customers automated logistic systems, **EDI, SAP, etc...**



global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

AUTOMOTIVE SECTOR

- SCREWS SERIES



- NUTS SERIES





global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

AUTOMOTIVE SECTOR

- BUSHINGS



- SPECIAL PARTS





global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

AUTOMOTIVE SECTOR

- ALUMINUM



- MACHINING





global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

AUTOMOTIVE SECTOR

Our Stocks





global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

TIERS 1 & 2





global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

OUR END USERS





global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

WINDPOWER SECTOR

- Manufacturing of fasteners **KITS** for critical windmill assemblies: **Foundation, Tower, Nacelle, Hub, and Blades**, with **Total Traceability**.
- Sizes from M-24 up to M-150, cold formed, hot forged or machined, depending on the size and characteristics of each part and according to each customer specification.
- Wide range of coatings provided, **Geomet, HDG, Xilant, etc...**
- Products validated by accredited laboratory.



global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

WINDPOWER SECTOR

T-BOLTS - BUSHINGS - ELASTIC PINS - PERPENDICULARITY NUTS - COUPLERS





global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

WINDPOWER SECTOR

• STUDS SERIES



• STUDS PACKING





global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

WINDPOWER SECTOR

- ANCHOR BOLTS



- ANCHOR BOLTS FOUNDATION





global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

WINDPOWER SECTOR





global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

OUR END USERS

SIEMENS Gamesa
RENEWABLE ENERGY

Vestas

ENERCON
ENERGIE FÜR DIE WELT

NORDEX

acciona
Windpower



BLADES

ENO ENERGY
Success with wind.

SENVION
wind energy solutions

air



OHL

C&F
Green Energy

elecnor

MTOI
High-Tech in Wind Energy Generation

tpi COMPOSITES



global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

I+D+i DEVELOPMENTS

- Stud Assembling Systems
- TH – Tension Holder
- TSH – Stretch Hold T-series
- SH – Stretch Hold
- UH – Universal Holder
- Blades Sectioning System
- Security Bolt and Nut
- SB – Shear Bolt - Variable Diameter Stud



global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

STUD ASSEMBLING SYSTEMS



- **Light Weight Series** – Made in Composite for in house assembling.
- **Medium Series** – Made in Duralumin for field assembling.
- **Heavy Weight Series** – Made in Tool Steel for torque tightening assembling.



global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

TH – TSH – SH – UH

TSF SYSTEMS FOR PULLED UNIONS THAT GUARANTEES PRELOAD WITH LESS
THAN 5% DISPERSION

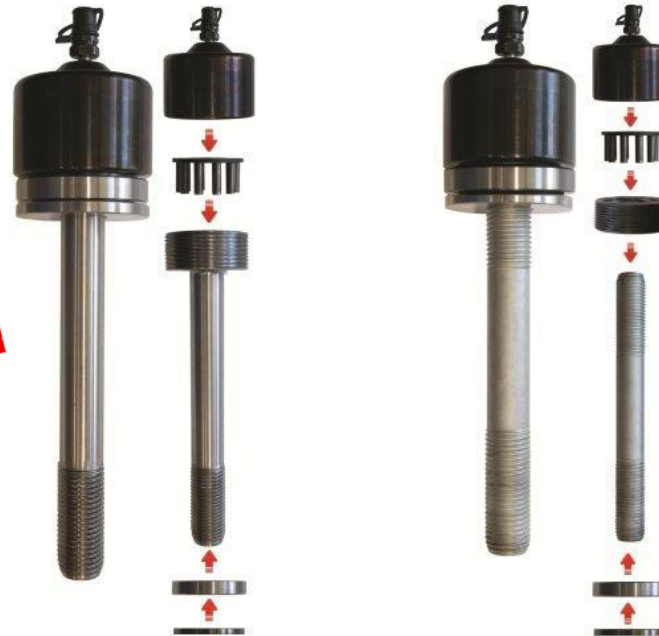


Lloyd's
Register

CERTIFIED

PATENTED

VIDEO EXPOSITION



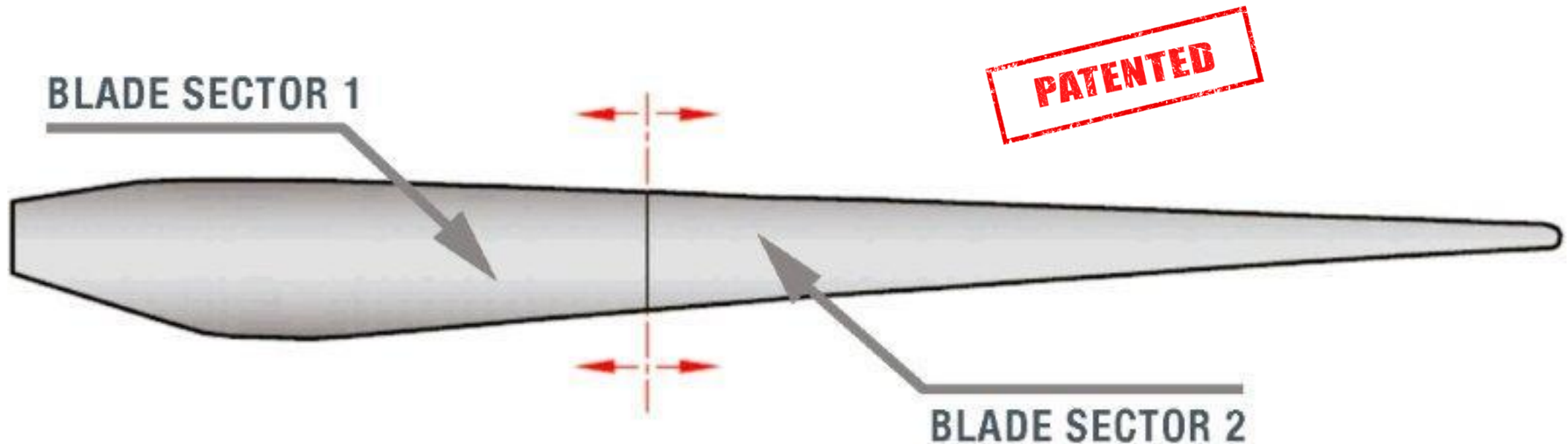


global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

BLADES SECTIONING SYSTEM

TSF SOLUTION TO REASSEMBLING SECTORED BLADES





global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

SECURITY BOLT AND NUT

SOLUTION AGAINST EXTERNAL ATTACKS





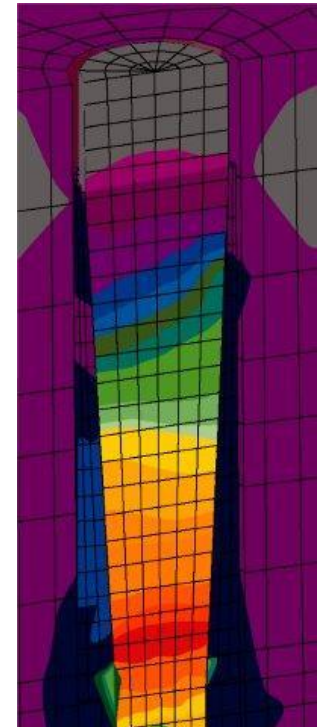
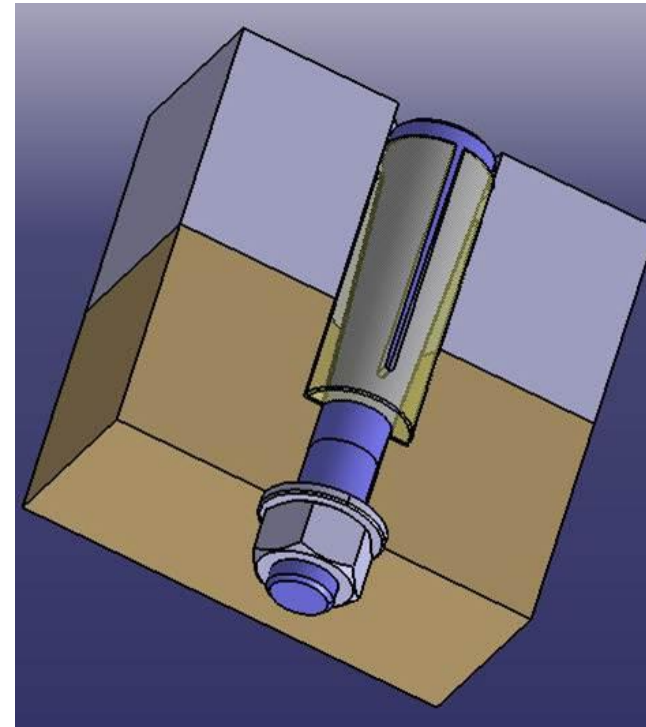
global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

SB

THE SOLUTION FOR SHEAR JOINTS

PATENTED





global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

OTHER SECTORS

- Thanks to the tools available and our success in their implementation, **TSF** is able to provide the best service in fasteners and other products according to customer requirements.
- Always based on **efficient service**, **high technical requirement** and **integral traceability**; **TSF** is the perfect partner for any present and future industrial development.



global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine





global fastening solutions

automotive – windpower – aerospace – oil & gas – nuclear – civil engineering – railway – marine

THANK YOU FOR YOUR
ATTENTION