

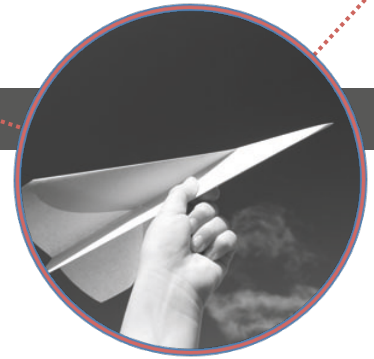


RTMBREDA 

IL VALORE AGGIUNTO IN RTM BREDA DELL'ACCREDITAMENTO ISO 17025 PER IL SETTORE AEREAUTICO

Ing. Grotto Mirko – Resp. Sistema di Gestione

Convegno Accredia A&T 03/05/17



Presentazione laboratorio

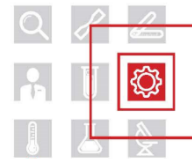
Rtm Breda

- 1917, Year of foundation
- 100, Number of Employees
- Sites in Italy: 3, Milan and Vicenza



Testing Lab

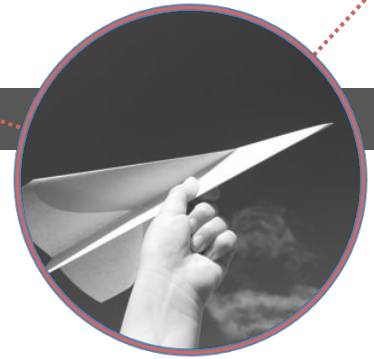
- 5200 m²
- EN ISO IEC 17025 accredited n°0025 (1991)
- NADCAP accredited
- Creep, LCF, HCF, Fracture mech., Corrosion, Metallography etc.



Materials & Engineering

- Plant Integrity and Residual life
- Failure analysis and Diagnostics
- FEA and Metallurgical Simulation





RTM Breda all'interno di Forgital Group



AERO
Aero Engine
Space



OIL & GAS
Deep Water
Surface



TRANSMISSION
Gear Wheel
Bearing

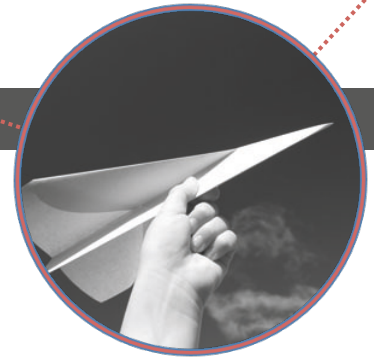


POWER GEN
Steam and gas turbines
Wind, hydro and
nuclear power plants



GENERAL MECHANICS
Chemical Equipment
Shipbuilding
Steel Mill Equipment
Construction and Mining

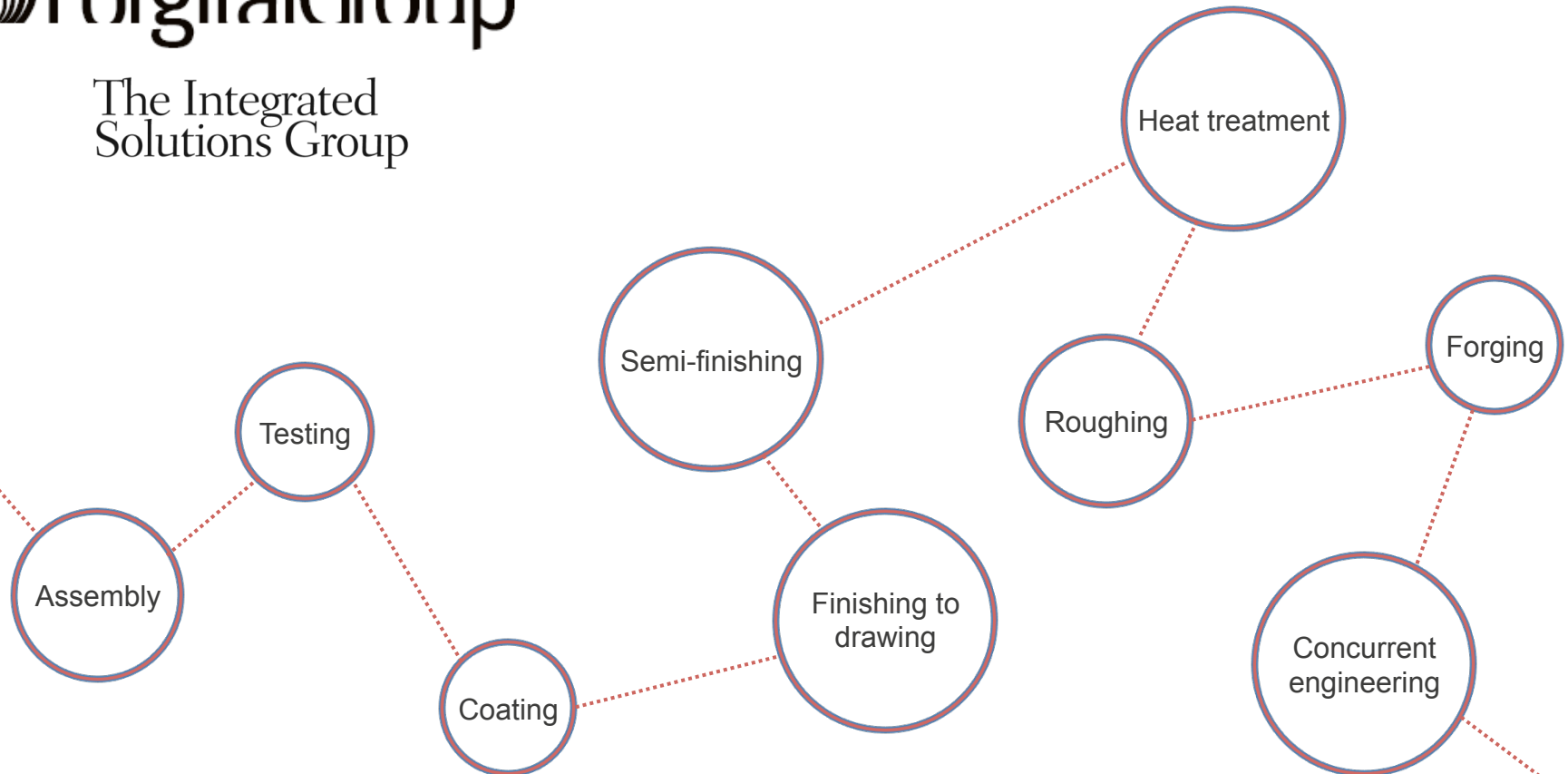


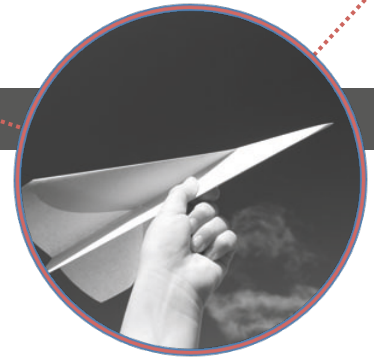


RTM Breda all'interno di Forgital Group



The Integrated
Solutions Group



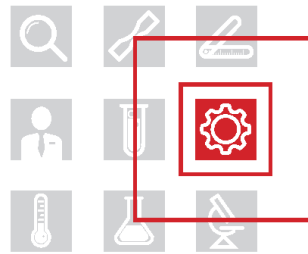


RTM Breda: Research, Testing & Materials



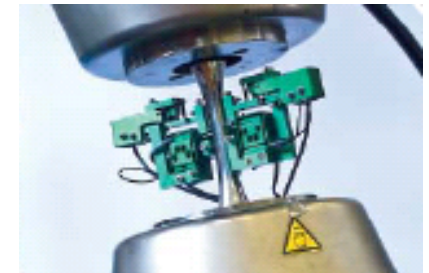
MATERIALS & ENGINEERING

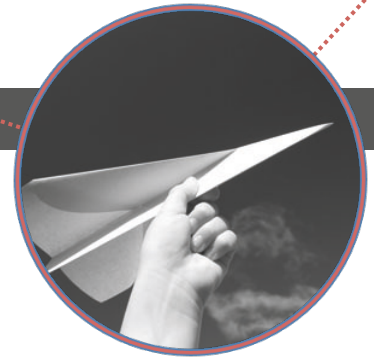
INGEGNERIA
FAILURE E DIAGNOSTICA



TESTING

PROVE MECCANICHE
METALLOGRAFIA
ANALISI CHIMICHE / CORROSIONE
MISURE DI TEMPERATURA
CONTROLLI NON DISTRUTTIVI





Rolls Royce contract con Forgital Group

21.06.2011

- Long Term Agreement (20 anni)
- 2 titanium forgings for Rolls-Royce Trent XWB Fan Case Module



Rolls-Royce

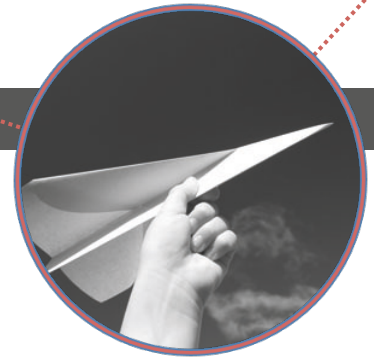
FLY S.p.A., a dynamic company specialising in high-technology machining, has signed a contract with Rolls-Royce. The twenty-year contract entails the production and assembly of "fan-case" modules for the Trent XWB engine.

FLY, with its legal offices in Grigno (Trento) - ITALY, is an emerging centre of excellence, created by the partnership between the Trentino Sviluppo company and the FORGITAL Group. FLY will supply Rolls-Royce with the finish machining and assembly of fan-cases constructed in metal alloys through the use of cutting-edge technologies. In addition to meeting the highest international ISO standards in terms of quality, FLY guarantees conformity to strict NADCAP specifications, the certification required of those who operate in aerospace industries.

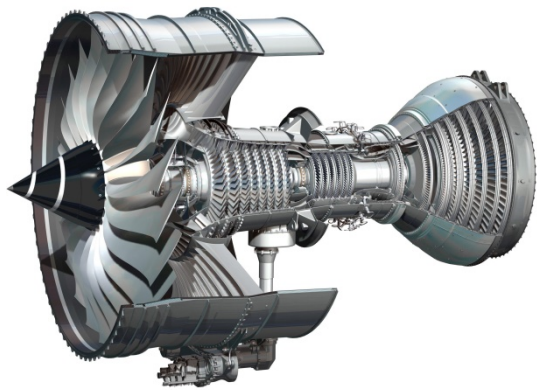
"We are very proud to be able to announce this agreement with a client as important as Rolls-Royce," declared Nadir Spezzapria, CEO of the FORGITAL Group. Just a little more than one year from the official inauguration, we have received the first significant return on investments made in hi-tech equipment and for the intense commitment made in selecting and training highly-specialised and flexible technical personnel. In this way we are reinforcing growth prospects that will allow a young and dynamic company like FLY to attain its objectives - becoming a solid economic player for the territory - and also serve as an excellent opportunity to improve employment figures with high added value.

This contract has a total value of 1.6 billion dollars. Forgital Group is a strategic player on a world level for aerospace companies from supplying forged rings to finishing and assembly of complete models. 2

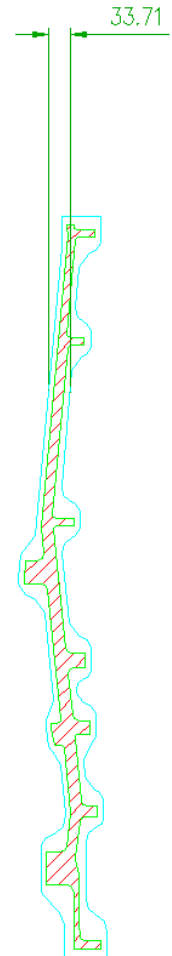
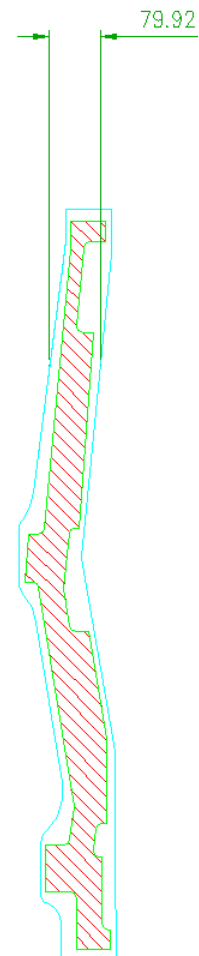
Forgital titanium forgings for Rolls-Royce Trent XWB Fan Case Module.

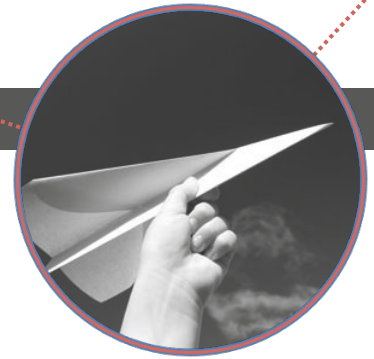


SIMULAZIONE – Progetto Trent FFC XWB



**Near-net
approach**

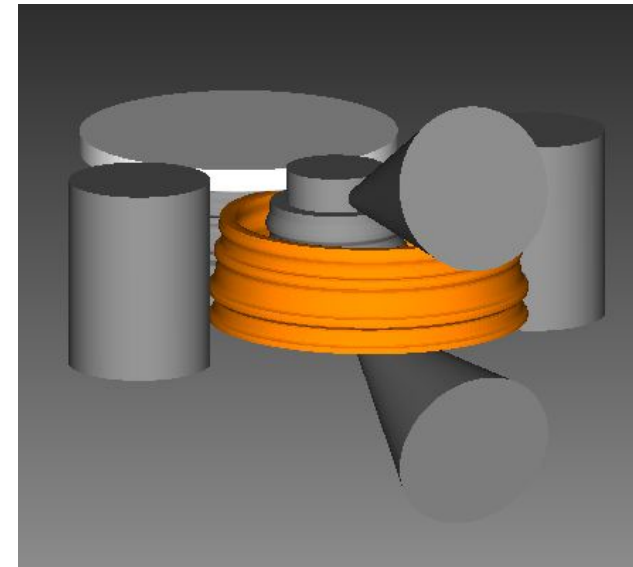




SIMULAZIONE – Progetto Trent FFC XWB

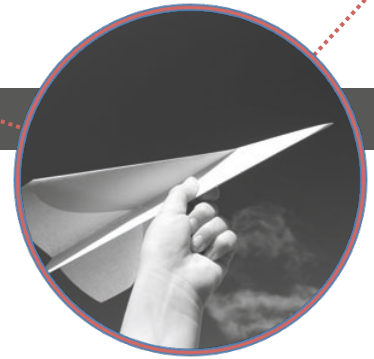
La simulazione FE può sostituire la prototipizzazione a grandezza reale con un processo:

- 1) più veloce
- 2) più economico (scarti inevitabili ma «digitali»)
- 3) facile da analizzare
- 4) informazioni tecniche fornite all'ufficio tecnico di difficile rilevabilità sul reale

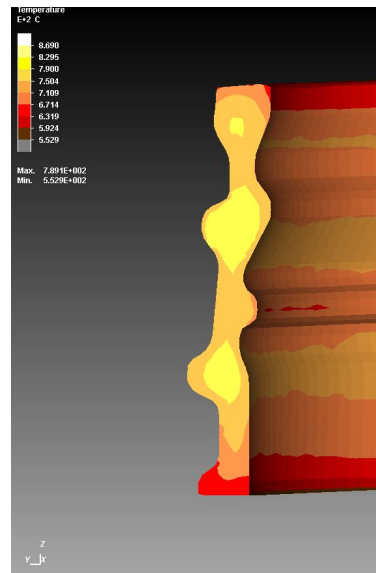
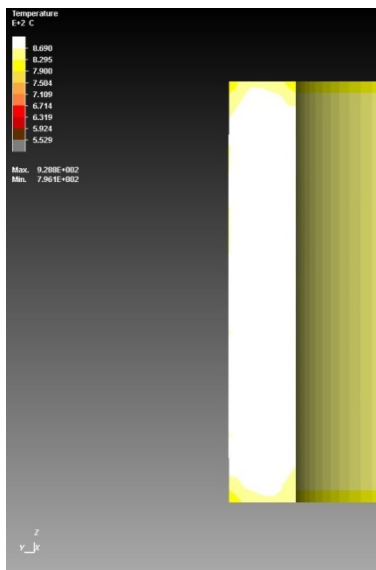


Input per simulazione efficace ed efficiente

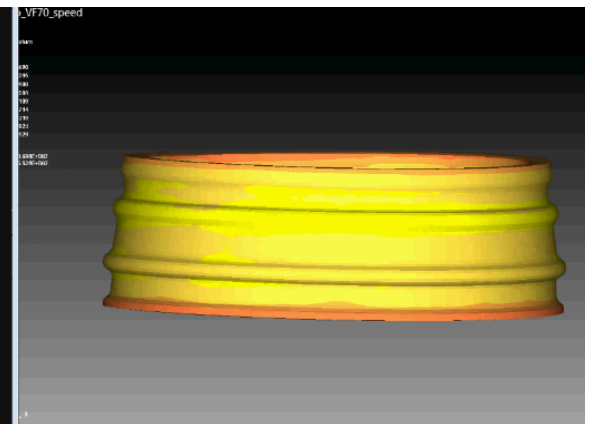
- ✓ **Geometria dell'anello → mesh**: un numero ragionevole di elementi per avere simulazioni veloci e affidabili senza perdita di precisione
- ✓ **Interazioni con gli utensili →** Parametri di contatto al fine di riprodurre il comportamento nell'impianto di laminazione
- ✓ **Comportamento degli utensili**: posizione, velocità
- ✓ **Storia termomeccanica**

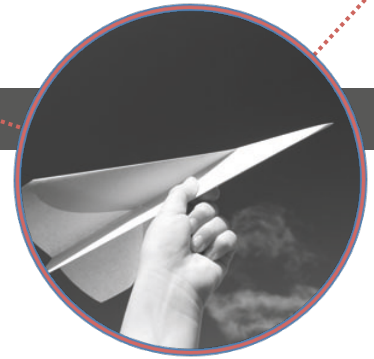


SIMULAZIONE – Progetto Trent FFC XWB

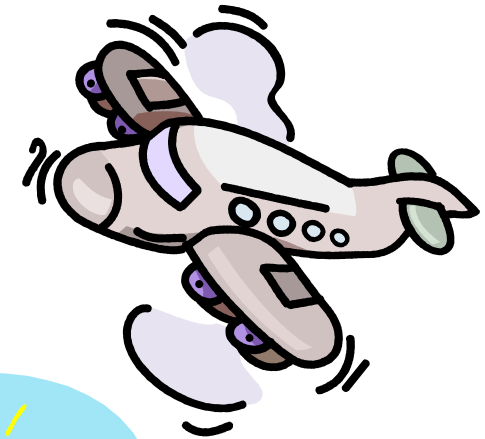
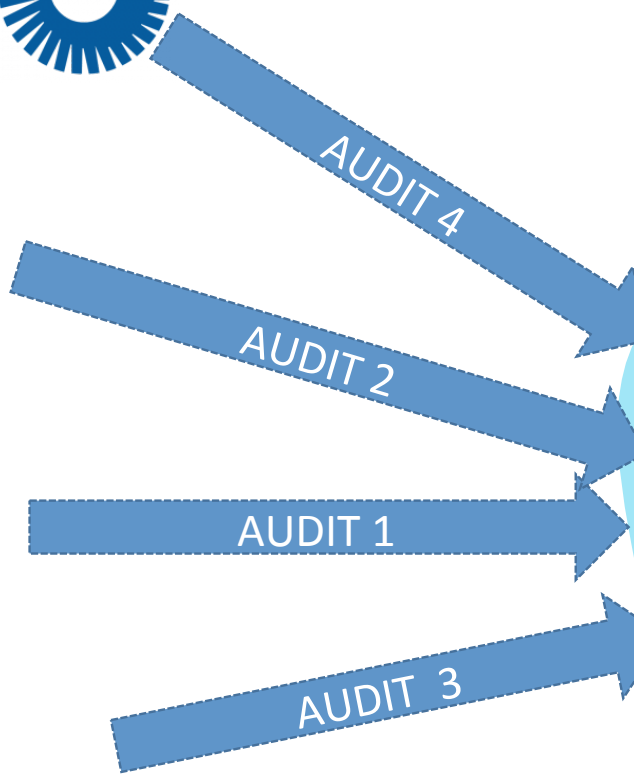


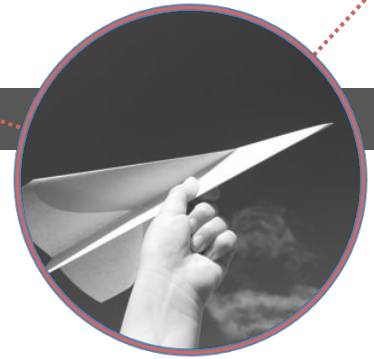
Full Ring Simulations



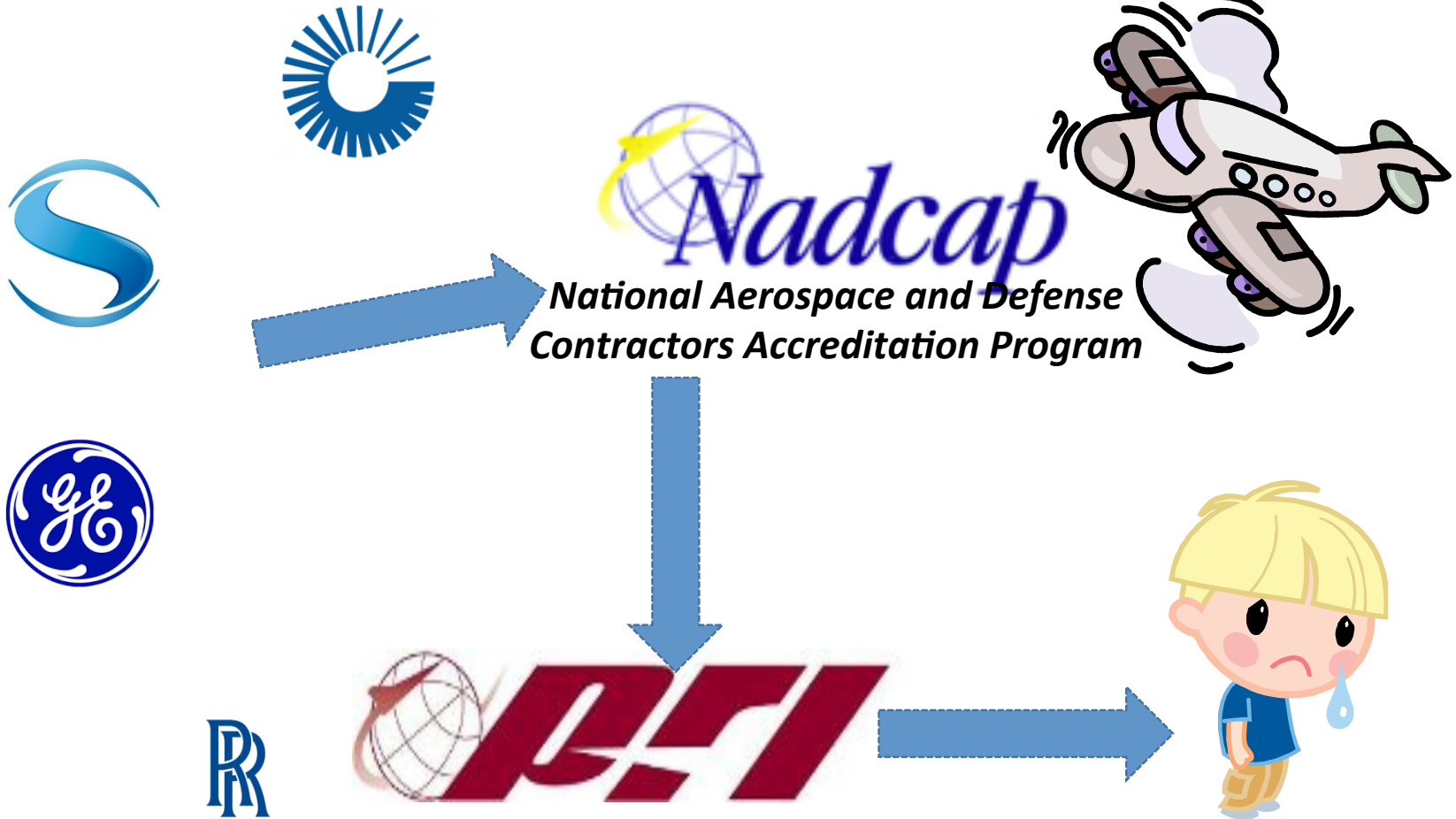


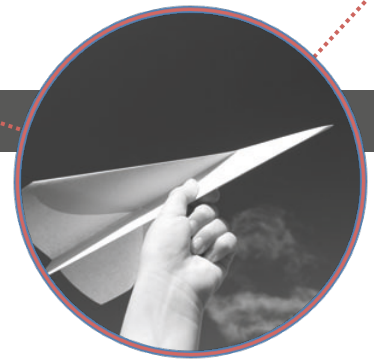
Qualifica cliente Aerospace prima del NADCAP





Qualifica cliente Aerospace



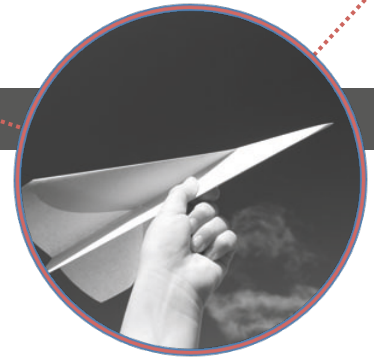


Obiettivi del programma NADCAP*

- Fissare **standard rigorosi comuni** in grado di soddisfare i requisiti di tutti i partecipanti
- **Sostituire l'auditing di routine** dei fornitori con un solo audit approvato attraverso un processo decisionale consensuale da parte dei membri della comunità di utenti
- Condurre **audit di processi speciali** più approfonditi e di **livello tecnico superiore**
- **Migliorare la qualità dei fornitori** in tutto il settore grazie all'introduzione di requisiti rigorosi
- **Ridurre i costi** grazie a una migliore standardizzazione
- **Utilizzare auditor esperti** a livello tecnico che abbiano già acquisito una certa familiarità con i processi
- Offrire **audit con frequenza** mirata più frequenti per gli iscritti di rilievo e audit meno frequenti per i fornitori

*Fonte: sito P.R.I

<http://it.p-r-i.org>



ACCREDITAMENTO ISO 17025 nel settore aero

2015 GE S-400 METALLIC TESTING LABORATORY MEETING

JUNE 18, 19, 2015

LOCATION: Ashland, MA at the Warren Center

Northeastern University Conference Center

Note: The meeting will be in a Seminar form to promote discussion and interaction with the speakers.

SCHEDULE:

JUNE 18, 2015

6-9 pm+

DINNER: Presentation by Phil Bretz the President of Metcut Research Inc.

JUNE 19, 2015

8-9 am

Introduction by Azzarto (GE) and Rochard on S-400 and the Nadcap Checklists, the new S-400 (June 2015), Nadcap and ISO 17025 and the ILAC MRA Process as it applies to S-400 Lab Accreditation

9-9:45 am

Derek Sicotte and Eric Dirats and Morgan Shaffer from DIRATS LABS on the GE LCP Process Managed by DIRATS for GE AVIATION

BREAK 9:45- 10 am

10-11 am

Jeffrey Smith from ELEMENT on the Pound Robin Process

11-11:30 am

Andrew Bohan (A2LA) and ISO 17025 and the ILAC MRA Process

11:30-12 Noon

Continued Discussion by Azzarto and Rochard (GE) on S-400

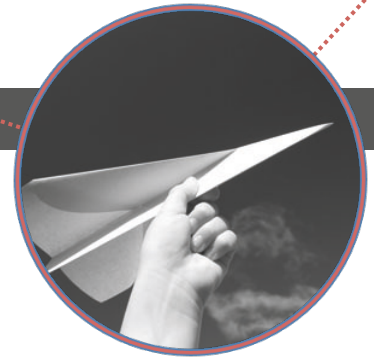
Meeting laboratori approved da GEAE
(un centinaio worlwide)

Perché convocare l'ente A2LA a presentare
del valore dell'accREDITAMENTO in questa
sede?



**Perché la maggior parte dei laboratori
non conosce l'accREDITAMENTO!!**

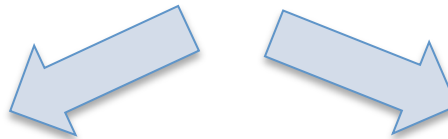
**La maggior parte – anche ben più grandi di RTM Breda – non
ne hanno (avevano) bisogno**



ACCREDITAMENTO ISO 17025 nel settore aereo

Uno studio presentato dal PRI nel 2015 forniva i seguenti dati:*

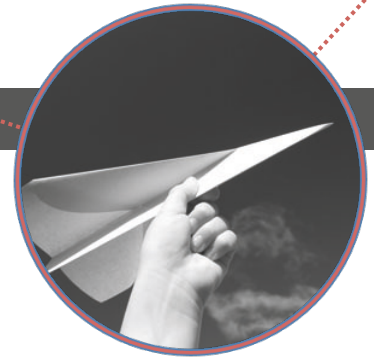
*PRI has completed a full analysis of the 250 Nadcap labs.
Only 42 (17%) have an ISO/IEC 17025 cert from an ILAC accredited body
(less than 0.2% of ILAC recognized laboratories)*



Per operare nel settore AERO non è
necessario l'accREDITAMENTO ISO
17025

Per il sistema accREDITAMENTO si tratta
di un settore di nicchia

**ISO 17025 NON DA' NESSUN VALORE
AGGIUNTO PER OPERARE NEL SETTORE?**



ACCREDITAMENTO ISO 17025 nel settore aereo

NADCAP – VANTAGGI

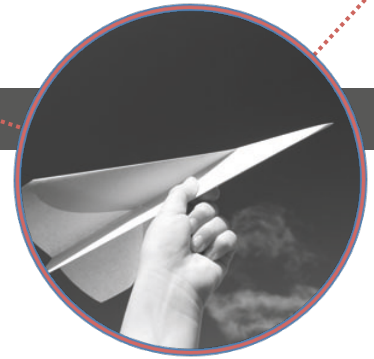
AC7101 /1 Rev.F “AUDIT CRITERIA FOR MATERIALS TESTING LABORATORIES GENERAL REQUIREMENTS FOR ALL LABORATORIES”

- 1. SCOPE** This Audit Criteria was developed for use by testing facilities for Nadcap International. The checklist may also be used by other testing facilities that are not members of the Task Group.
- 4.12.3 Nadcap Materials Testing Laboratories recognizes existing quality systems approvals in the form of ISO/IEC17025 certifications by an ILAC Approved source (www.ilac.org) or AC7006 issued by the Materials Testing Laboratories Task Group.
- ISO/IEC 17025 is required for all laboratories accredited to AS/EN/ISO/IEC 17025, or AC7006.



AUDIT CRITERIA EQUIVALENT TO ISO/IEC 17025:2005

Check list di 62 pagine – minimo 1 giornata di audit

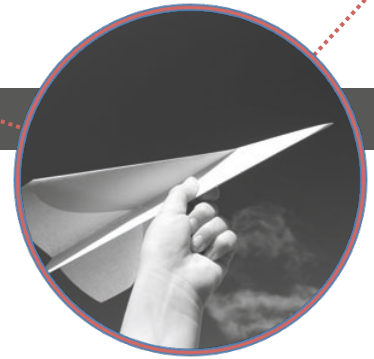


ACCREDITAMENTO ISO 17025 nel settore aereo

NADCAP – POTENZIALITA'

NADCAP MEETING 2015

- A2LA ha convocato il PRI per cominciare a discutere le modalità per accorpare i due accreditamenti
- CEO PRI ha comunicato che non è di loro interesse, però comprende la necessità dei laboratori di ridurre il numero di audit e di cost saving, quindi si sono detti disponibili a trattare l'argomento.
- Trattativa in discussione : consentire all'ente di accreditamento di qualificare gli auditor NADCAP per fare anche la ISO 17025, in questa maniera si fa l'audit NADCAP come sempre, però in più (magari con solo 1/2 giornate aggiuntive) il laboratorio può accorpare rinnovi/sorveglianze ISO17025
- Questo tipo di accordo può essere fatto solo in maniera diretta con gli enti di accreditamento, quindi a livello nazionale: ovviamente 2LA è di interesse perché è per gli USA, se di interesse reciproco valuteranno anche altri mercati sufficientemente grandi



ACCREDITAMENTO ISO 17025 nel settore aero

QUALIFICHE CLIENTE – GEAE S400 Certified Material Testing Laboratories

1. **PURPOSE** : This Quality Specification establishes disciplines required by GE Aviation for Certified Materials Testing Laboratories [...] . **All other test methods not listed in S400 but are part of ISO 17025 approved scopes**, may be used for GE Aviation work and approval is understood as part of the GE Aviation GT-193.

2.2. RE-CERTIFICATION

2.2.1. For Independent Laboratories the process for **re-accreditation is based on an ISO 17025** audit by an ILAC accreditation Body or GE Aviation.


Accreditamento

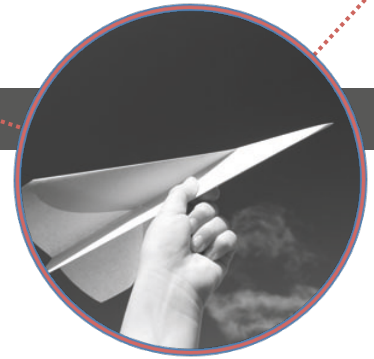


Partecipazione RR



Analisi chimica mediante quantometro using spectrometer	Vedere elenco dei dettagli delle prove flessibili
Analisi chimica mediante quantometro using spectrometer	Code AIOF GE S-400 del 03/06/2016 +ASTM E1086-14

RTMBREDA 		Carré, 21st September 2015
Report ref #: 11583-2015	Lab # 01	Page 1 of 4
FINAL TEST REPORT GEAE ROUND ROBIN 2015 FOR CREEP TEST		
Test @ 600 °C		
Participant:	HAYNES INTERNATIONAL - KOKOMO	17

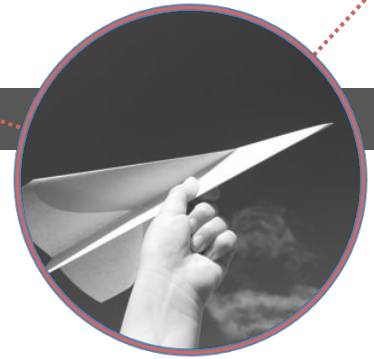


ACCREDITAMENTO ISO 17025 nel settore aereo

QUALIFICHE CLIENTE – SAFRAN Procedure 0430

1. § 1.7 Qualification requirements

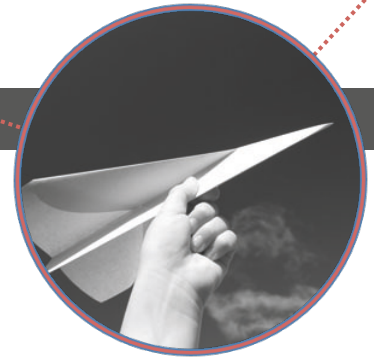
For independent laboratories, the management system **must be accredited per ISO/CEI 17025**. For captive laboratories, the applicable management system must be certified EN/AS 9100 and based on the requirements of standard ISO/CEI 17025.



ACCREDITAMENTO ISO 17025 nel settore aereo

VANTAGGI PER RTM BREDA

- Riduzione **numero di giornate** di audit
- Maggiore attenzione alle **normative** anziché verso il cliente
- Maggiore sorveglianza al **sistema di gestione**
- Focus sul **miglioramento continuo**
- Appeal nell'**elenco accreditamenti / qualifiche**



Grazie per l'attenzione

Mirko Grotto

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Tel. +39 0445 318529 Mob. 348 0081461

Sede legale e unità operativa Via Po, 84 – 20032 Cormano (MI)

Sede amministrativa e unità operativa Via Bianche, 18 – 36010 Carrè (VI)

WWW.RTMBREDA.IT