LIST OF SEMINARS PROPOSED BY WÄRTSILÄ

NOEMBER 2015

Seminars

1- Materials in 4-s engines:

An overview of the materials used in large bore 4-stroke engines. Criteria for material selection, challenges and new developments. 3 hours.

Area: Materials-RD-TS
Contact: E.Hlede
Available: 2016

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Seminars

3- 4s Connecting rod design & verification

Basic concepts about 4s conrods, material & making process. Initial design, starting data, preliminary calculations & FEM finalization. 2h
Area: Materials-RD-TS
Contact: F.Brighi
Available: Yes

4- Steel types & designation

General training about steel, types, applications in 4 stroke combustion engines components. 2h
Area: Materials-RD-TS
Contact: F.Brighi
Available: Yes

5- Steelmaking & metallurgy:

Training to the steel making processes, EAF cycle, LF treatment, Degassing VD/VOD/RH, casting (continuous & ingot), applications, quality & defects. 2h

Area: Materials-RD-TS
Contact: F.Brighi
Available: Yes

6- Powertrain calculation

Overview of classical, standard and Multibody simulation methods for calculating the powertrain components (Crankshaft, Conrods, Liners).
Area: Analysis
Contact: F.Castellani
Available: 2016

7- Cylinder Head an Liner calculations

Workflow for calculating the thermomechanical fatigue on Cylinder Heads and Liners.

Area: Analysis
Contact: F.Castellani
Available: 2016

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Seminars

8- cooling water circuit of 4 Stroke diesel engines:

Description of cooling water circuits with all components and its related needs, integration with external systems (ship engine room) in order to satisfy engine thermodynamic heat balance (3 hours)

9- lubricating oil circuit of 4 Stroke diesel engines:

Description of lubricating oil circuits with all components and its related needs, integration with oil treatment in external system (2 hours)

10- fuel and compressed air circuit of 4 Stroke diesel engines:

Description of fuel circuits with all components and its related needs, in particular highligth on fuel pretreatment required to ship engine room (2 hours)

Area: Ancillary systems-RD
Contact: P.Calcinotto
Available: Yes

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Seminars

11- Bearings in 4-s engines:

Sliding bearing working principles, application in 4 stroke engines, materials and typical failures. 3 hours
Area: Running Gears-RD
Contact: L.Perinel
Available: Yes

12- Crankshaft in 4-s engines:

Overview of dimensioning, calculation, production and balancing. 3 hours

Area: Running Gears-RD
Contact: L.Perinel
Available: 2016

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13- Fuel Injection 4 Stroke diesel engines:

Basic description of fuel injection components and system, starting from conventional and ending with the latest common rail technology

Area: Fuel injection-RD
Contact: L.Zuanigh
Available: 2016

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Seminars

14- Engine vibration:

The lectures starts with the introduction to basic concepts of vibrations then expands to speific concepts. 4 hours.

16- Noise & Vibration excitation onboard Ships:

The lecture lists all typoligy of onbard excitation and phisics behind. Special attention is gievn to the 4-stroke diesel engine. 4 hours.

Area: Noise & Vibration-RD
Contact: C.pestelli
Available: cancelled

15- Engine noise:

The lectures starts with the introduction to basic concepts of noise then expands to typical approach to study and reduce noise of engines. 4 hours.
Available: cancelled

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Seminars

17 - Torsional vibration in Marine and power plant applications based on 4S Diesel engines:

Basic theory, practical application adn case history of troubles. TS

Contact: A. Roveredo

Available: 2016

18 - Failure analysis of Engine components:

A case history of failures of some engine components and relative countermeasures. TS-RD

19 - Surface effect on fatigue fracture initiation: scratches, sharp corners, local damage mechanisms

Fracture mechanics overview and Typical notch-fatigue cases from field TS

20 - Non Destructive Testing and microscopy techniques comparison

How to select methodologies and comparison of results from different imaging techniques.

Contact: P.Machetta

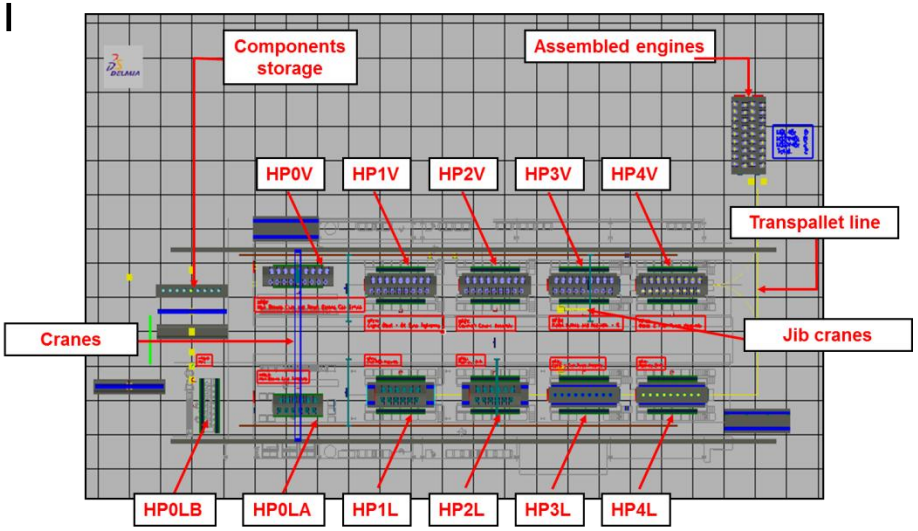
Available: yes

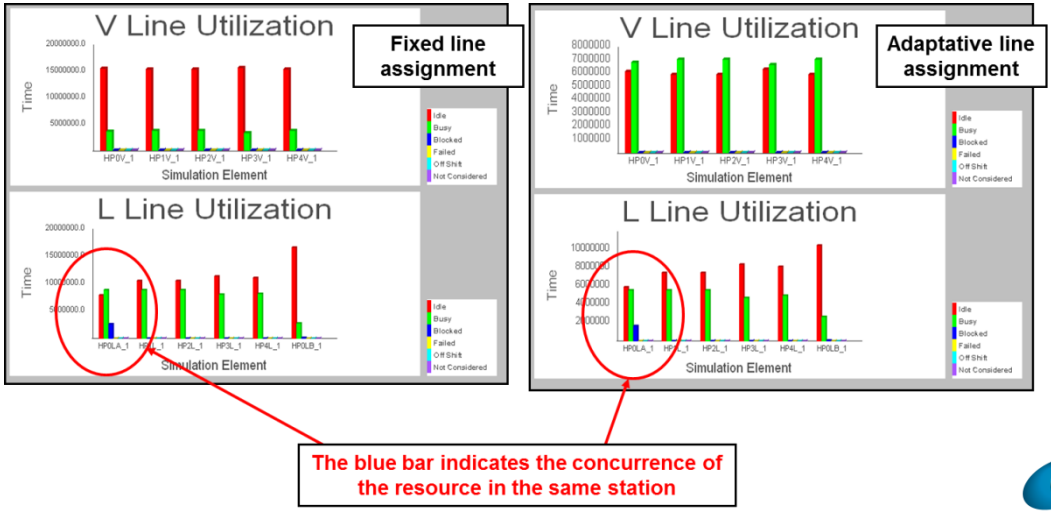
Seminars

21 - La Simulazione per la validazione di nuovi stabilimenti e lo studio dei processi produzione **(4 ore)**

- Teoria e pratica della Simulazione
- applicazione al processo di lavorazione meccanica
- Applicazione al processo di montaggio
- applicazione alla progettazione di un nuovo stabilimento

•Based on elementary data the simulation model has been developed





Contact: P.Pierdomenico
Available: yes

Seminars

22 - Evoluzione dalla fabbrica tradizionale a quella snella: un caso reale relativo ad un'azienda che produce su ordine cliente (a commessa) **(3 ore)**

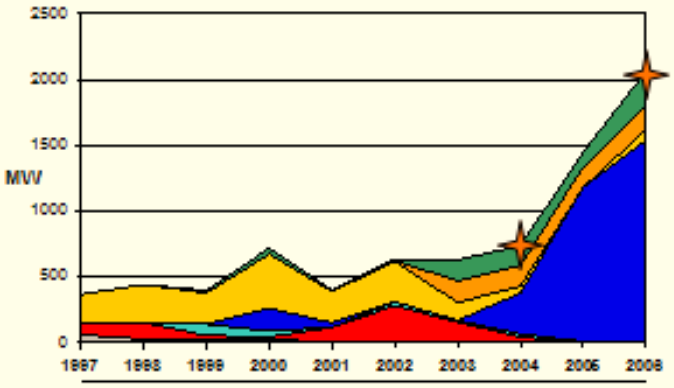
Production capacity to face market high volume demand

Project 3000+

The project was launched in 2006 with the target of increasing Trieste production capacity up to the levels requested by the market.

Main involved areas:

- Assembly, testing & finishing: giving the requested volumes in a flexible way
- Preassembly: developing a "line" concept layout
- In-house Logistics: developing a new layout and organization, focused on better integration with production and faster supply of the materials



In 2006 we already double the production volumes compared to 2004 (+50% every year) The market showed further increase in demand

© Wärtsilä Italia Process Development

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Contact: P.Pierdomenico
Available: yes

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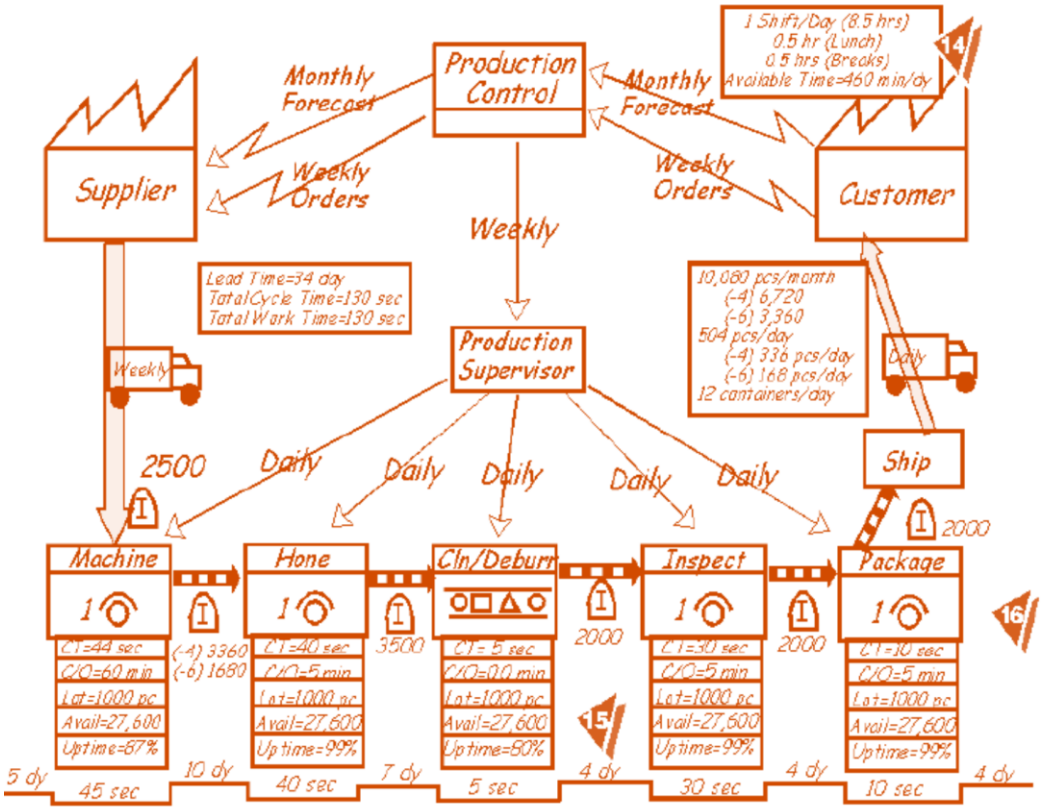
23 - Rapid Plant Assessment.

- L''RPA,chiamato pure "Read-a-Plant" è uno strumento che può essere usato per trovare opportunità di miglioramento nell'ambito della produzione e dei processi.

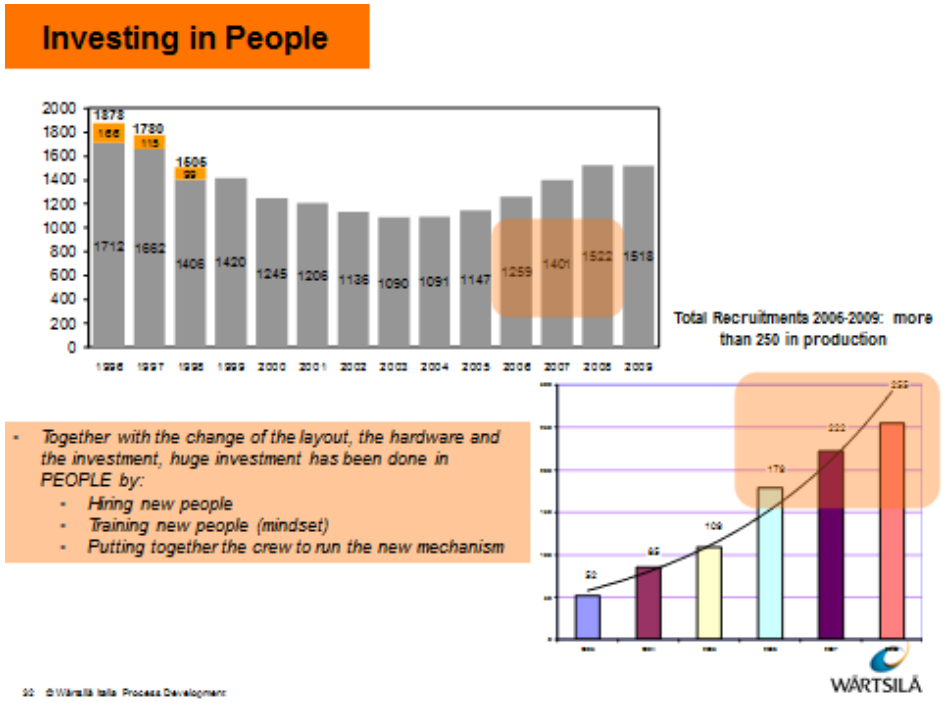


- Fu ispirato da alcuni managers giapponesi che durante una visita ad una fabbrica americana riuscirono a darne una valutazione esaustiva in 1 ora**. (2 ore)**

Contact: P.Pierdomenico Available: yes

Seminars

24 - La gestione del personale (2 ore)
- Selezione
- Addestramento
- Gestione gruppi remoti



25 - Le richieste della produzione nell' industria moderna agli ingegneri di domani (2 ore)

Contact: P.Pierdomenico
Available: yes

Seminars

26 - Un’ applicazione della metodologia degli ‘scenari’ (2 ore)

Per affrontare il problema della previsione è utile anche l’integrazione con il metodo degli scenari, definibile **come la presentazione dei fattori-chiave da considerare e la descrizione del modo in cui tali fattori possono influenzare la domanda globale.** Lo scenario è una cosa diversa dalla previsione. La previsione è più un giudizio che tende a prevedere una situazione, isolatamente. **Lo scenario è invece uno strumento concepito per far riflettere, per comprendere meglio la situazione di un mercato e le sue evoluzioni passate. Uno scenario va osservato con altri scenari, uno scenario di base e una serie di scenari alternativi.**

Tale criterio presenta dei vantaggi sul piano gestionale: per prima cosa, rende sensibile l’impresa circa l’incertezza di ogni situazione di mercato; inoltre, facilita l’integrazione di apporti di differenti metodi di previsione. Inoltre, la sua applicazione rende la gestione più flessibile e incita l’impresa a sviluppare dei piani alternativi e un sistema di reazione d’urgenza pronto a entrare in azione.

Contact: P.Pierdomenico
Available: yes

Seminars

28- Marine market:

sea-borne transportation basics
fuel mix
emission regulations impacts on transportation
market expectations on new-buildings

Focus on a specific vessel:

Market and fleet analysis
Vessel description
Machinery selection
Case study

Area: Portfolio & Applications Development
Contact: G.Tirelli
Available: yes

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Seminars

29 - use of Steerable Thrusters in dynamic positioning for offshore vessels

Area: Propulsion Application Engineering

Contact: M.Goiach

Available: yes

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Seminars

27 Techincal solutions for artic engines

Area: Ancillary systems-RD
Contact: P.Calcinotto
Available: Yes

30 Internal Combustion engine emissions

Area: Performance
Contact: tbd
Available: tbd

31 Turbocharging

Area: Turbocharging
Contact: Gino Rizzetto
Available: 2016

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Seminars

32 Create a Business Plan

Area: Busniess control
Contact: E. Merzliak
Available: 2016

33 Create a Business Case

Area: Busniess control
Contact: E. Merzliak
Available: 2016

34 Engine Performance

Area: Performance
Contact: Caputo Gennaro
Available: 2016

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