APRICOT- Project «pinbone»

Norway Seafoods – fokus og ønsker

- Verdien av fileen og utbytte av råstoff er alfa og omega for file-industrien
- Siste års utvikling har vært slik:
  - Blokkproduksjon av fersk råstoff
  - IQF porsjoner,»sello 5» og blokk
  - Frosset råstoff kombinert med fersk
  - Kina kommer på banen som torskefisk produsent
  - Ferske loins og blokk, porsjoner
- Hva er neste trussel for fileindustrien i Norden ?
  - Chilled produkter evt fra Kina ?
  - Kostnadsnivå i Norden og spesifikt Norge for os.
  - Nære lavkostnadsland ?
- Hvad kan vi gjøre i industrien ?
  - Øke utbytte.
  - Øke verdien av fileen ved å fjerne bene uten å skjære det fra, nye produktmuligheter.
  - Minske lønnskostnader, utvikle arbeidsplassene.

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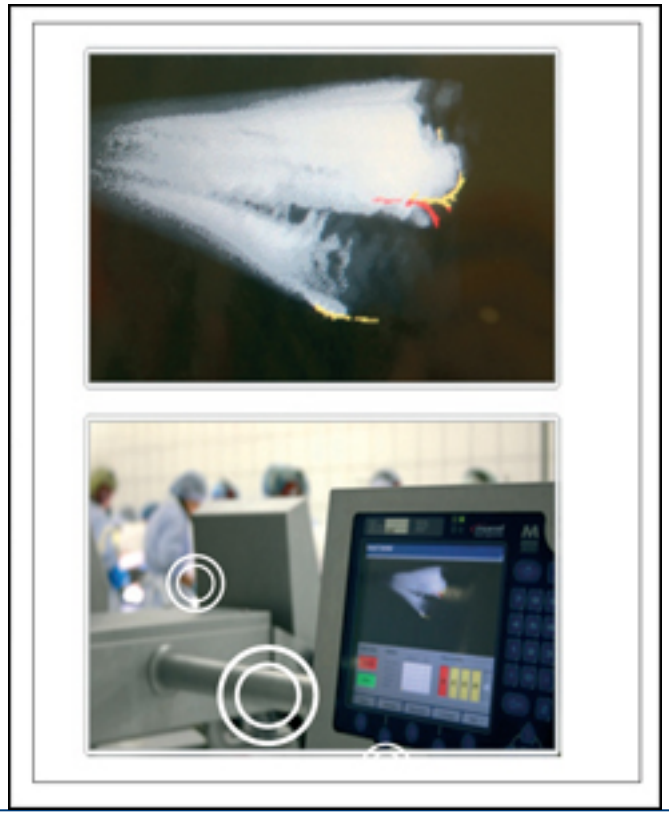
Norway Seafoods – motivator til prosjektet

Automated Pinbone Removal In COd and WhiTefish (APRICOT),



...to develop smarter and more efficient processing technology

The answer to global competition is more automation

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Summary

- Objectives
  - Develop a **detection unit** for 3D positioning of pinbones
  - Develop a method for on-line image-guided **pinbone cutting** (phase 1)
  - Implement a **working prototype**
- Project period
  - From 1-Jan-2012 to 31-Dec-2014. Total 3 years.
- Consortium
  - Marel (project owner, project leader)
  - Norway Seafoods
  - Faroe Origin
  - Stiftelsen SINTEF
  - SINTEF Raufoss Manufacturing

Work packages

WP no.: 1	Name: SPECIFICATION AND OVERALL CONCEPT	Start: Month 1	End: Month 4
Overall aim for Wp 1:	Establish system specifications in terms of accuracy, speed, cost and other industrial parameters.		
Deliverable 1.1	Name and overall aim **Analysis of requirements**	Supervision: Norway Seafoods	Total from all partners: 400 man-hours
Deliverable 1.2	Name and overall aim **System specification**	Supervision: Norway Seafoods	Total from all partners: 380 man-hours
WP no.: 2	**Name:** **AUTOMATED PINBONE LOCALIZATION**	**Start:** **Month 3**	**End:** **Month 35**
Overall aim for Wp 2:	Develop sensor solution and image analysis algorithms for precise 3D positioning of the complete pinbone.		
Deliverable 2.1	Name and overall aim Sensor requirements	Supervision: Stiftelsen SINTEF	Total from all partners: 1.000 man-hours
Deliverable 2.2	Name and overall aim Sensor solution	Supervision: Stiftelsen SINTEF	Total from all partners: 1.000 man-hours
Deliverable 2.3	Name and overall aim Image analysis algorithms	Supervision: Stiftelsen SINTEF	Total from all partners: 2.983 man-hours
WP no.: 3	**Name:** **SYSTEM INTEGRATION AND PROTOTYPE DEVELOPMENT**	**Start:** **Month13**	**End:** **Month 35**
Overall aim for Wp 3:	Develop a prototype system for automatic realtime removal of pinbones from white fish/cod		
Deliverable 3.1	Name and overall aim Preliminary design for a prototype system.	Supervision: Marel	Total from all partners: 5.000 man-hours
Deliverable 3.2	Name and overall aim Prototype for pinbone removal ready.	Supervision: Marel	Total from all partners: 14.010 man-hours
WP no.: 4	**Name:** **SYSTEM TESTING**	**Start:** **Month 25**	**End:** **Month 35**
Overall aim for Wp 4:	Performance evaluation of the system at relevant Nordic plants.		
Deliverable 4.1	Name and overall aim Performance report on system	Supervision: SINTEF RM	Total from all partners: 2.110 man-hours

Total Project Kostnader 26 MNOK NMIP 5 MNOK

NORWAY SEAFOODS

norden
Nordic Marine Innovation

Nordic Marine Innovation Programme
– A unique Nordic cooperation in the marine sector

Project 11056:
APRICOT
(Automated Pinbone Removal In COd and WhiTefish)

January 2012-December 2014

A terminal at a fish processing line, showing a fish fillet X-ray image for quality inspection

The objective of this project is to develop and test equipment to automatically cut the pinbones out of whitefish fillets, such as cod.

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