GREEN skills for enterprises - Sustainable Training for Automotive suppliers cluster

Lifelong Learning Programme

GREEN STAR
GREEN skills for enterprises Sustainable Training for Automotive suppliers cluster

Bilbao (Spain) 29th May 2015

BRUSS

Index

Bruss Group

- Locations
- Products
- Customers & Sales
- Bruss Durango:
  - **Location**
  - **Product portfolio**
  - **Manufacturing processes**
  - **Management system certificates**

Green Star: Waste module experience at Bruss Durango

- Why to join the program.
- Action plan structure
- Training modules: Structure and content.
- Preliminary evaluation of performed activities.
- How to define the program effectiveness?

Introduction of the BRUSS-Group

- Locations & Co-operations

Foundation 1959

Privately held and owned company
With ~2300 employees

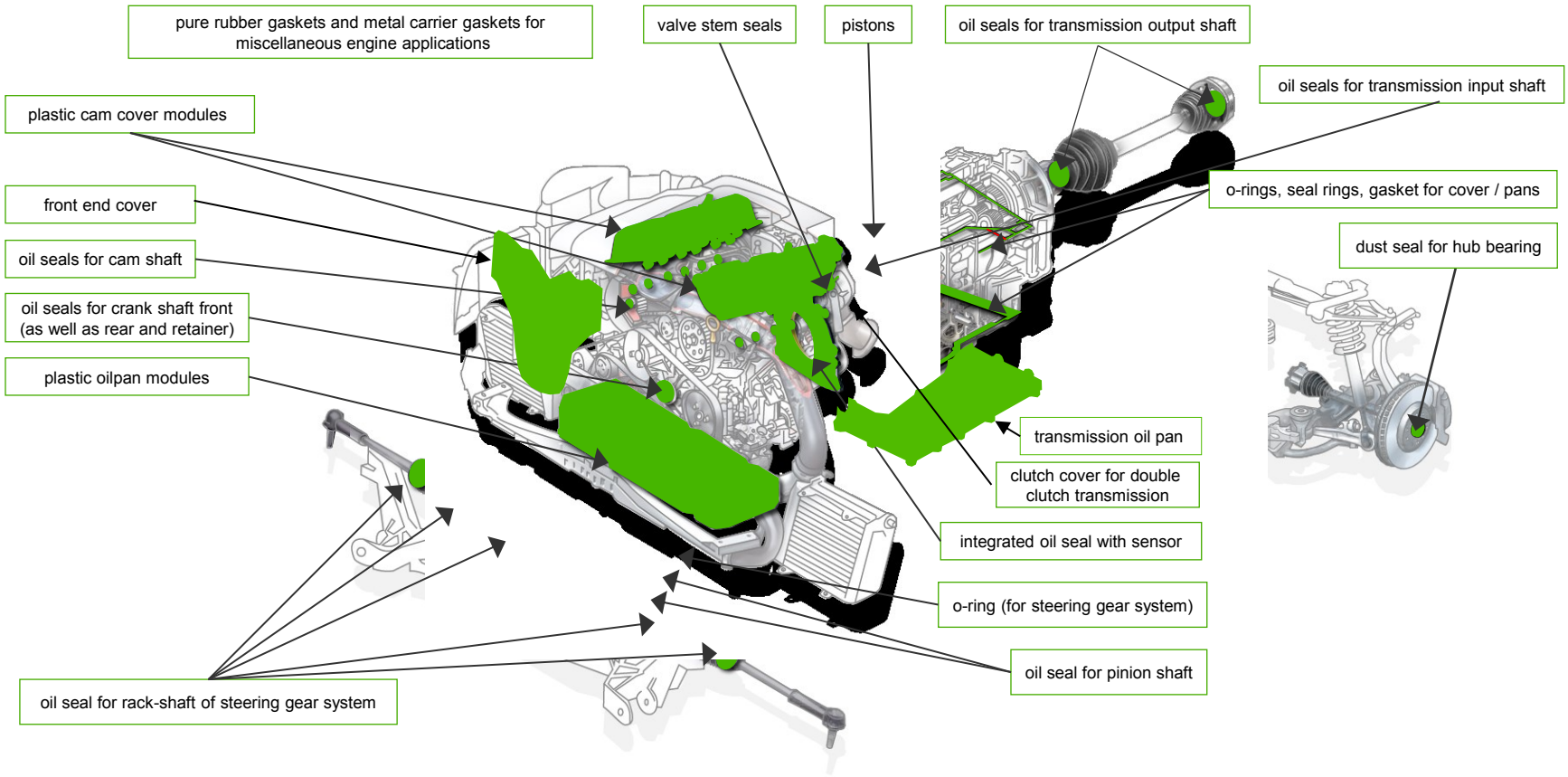
Durango plant Foundation 1967

Currently with ~ 245 employees, the plant was owned along the time by:

Federal Mogul from 1967 to 1989
BRUSS-Federal Mogul from 1989 to 1999
Dichtungstechnik BRUSS from 1999

Product Portfolio

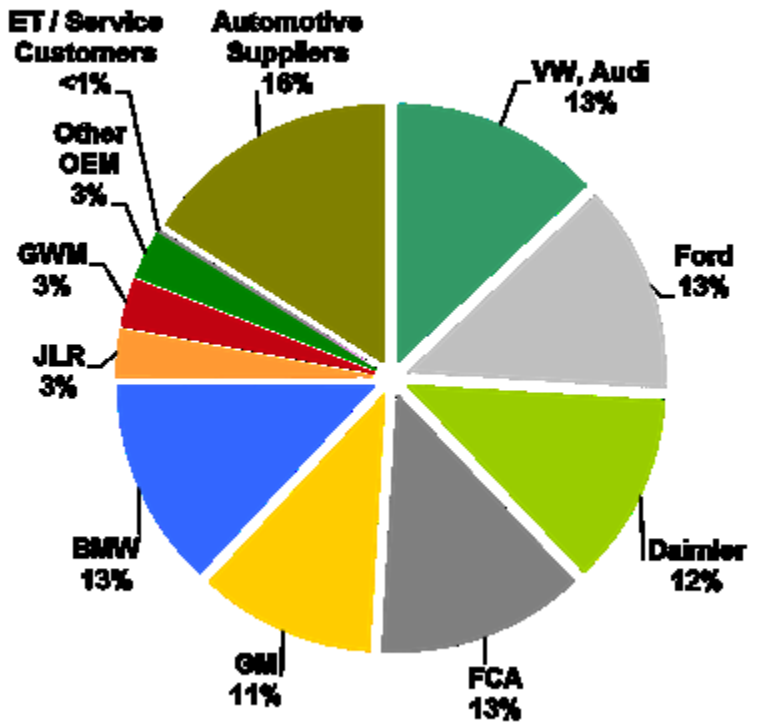
- Sealing the powertrain through innovation and integration



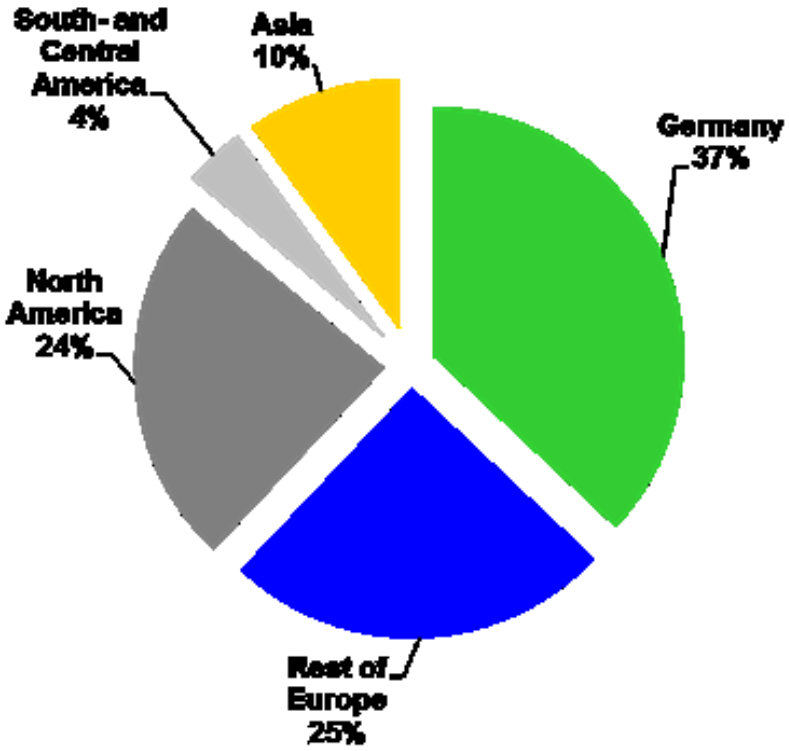
Turnover BRUSS-Group

- Sales by customers and regions 2014

Sales by customers: 230 Mio €



Sales by regions



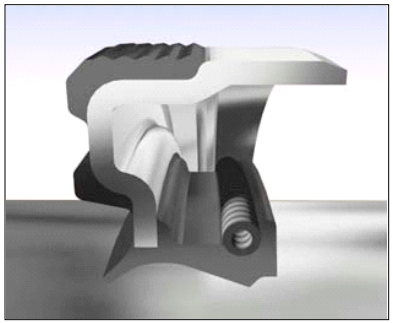
BRUSS plant in Durango / Spain

2015: 245 Employees

BRUSS Juntas Técnicas S. en Com.

Estanislao Labairu, 2
48200 Durango
Spain
Phone: +34 94 621 76-30
Fax: +34 94 621 76-67
E-Mail: BrussEspana@bruss.de

Product range



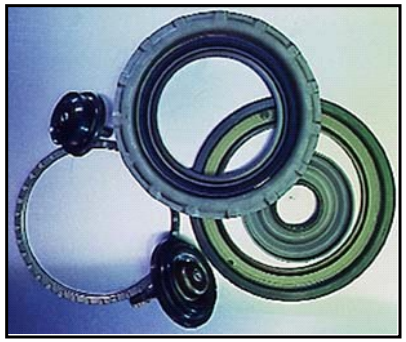
Shaft seals (RWDR)

Sales percentage: 45%
Application: (mainly) **Gear gox**
Production technology: **IM** und **CM**
Customers: Ford, Getrag, Daimler, Renault, GM, ...

Cassette seals

Sales percentage: 45%
Application: **Truck axles**
Production technology: **IM** und **CM**
Customers: Schaeffler FAG, M.A.N., Scania, Arvin Meritor, Nissan,

Bonded pistons



Sales percentage: 10%
Application: **Automatic gear-box**
Production technology: (mainly) **IM**
Customersn: Daimler, Ford, ZF, VW.

Production process

		Materials			
		Stamped Metal case	Rubber	Spring	Packaging material
		Steel	Elastomeric	Steel	Plastic / Cardboard
Process	Material preparation	Degreasing + phoscoating	Preforming		
	Moulding process	Vulcanisation in press			
	Postcuring	Post-curing in oven			
	Final and assembly operations	Manual or by automatic machine			
	Packaging	Manual integrated in the manufacturing cells			

Management System Certificates

- ISO/TS 16949:2009 valid till february 2018
(By TÜV Nord Cert. GmbH.)

- ISO 14001:2009 valid till April 2016
(By TÜV Nord Cert. GmbH.)

- Spanish law 31/1995 for H&S at work valid till April 2018
(By Crossber Audit S.L.)

Why to join the Green Star project?

- Optimization of rubber waste disposal: From current land-filling to reuse/recycling/valorisation.
  Industrial net philosophy according to ZeroWIN European networking project (visit www.zerowin.eu).

- Implication of all the personnel of the company in the development and daily application of the environmental system.

Main steps of performed action plan

- Selection of an specific problematic: Waste
- Definition of a project team.
- Review of existing experience by the project team (GT VET Greening Technical VET – Sustainable Training Module for the European Steel Industry)
- Identification of GT-VET elements adaptable to Bruss and identification of specific elements related to the location of Bruss.
- Preparation of training material.
- Realization of training activities.

Characteristics of the training program

- Focus in plant operators (blue collar), who are the people in direct contact with the generation and handling of waste.
- Established 4 complexity training levels.
- Based in 3 hours training sessions (1 theory hour plus 2 hours of practical exercise).
- Aligned with ISO 14.001 training requirement.

Training modules content

- Level 1: What is waste?

TITLE	WASTE AND ITS IMPACT
LEARNING TARGET	- Define “waste” - Identify the different types of waste - Describe the different methods to eliminate waste. - Define the concepts of the European Hierarchy in Waste Management.
ACTIVITIES	- QUIZ - Review at the shop-floor how waste is handled.

Training modules content

- Level 2: Waste treatment.

TITLE	TYPE OF WASTE GENERATED AT THE WORK PLACE
LEARNING TARGET	- Environmental impact of waste. - Accidental or improper handling generated issues. - Procedures for waste recuperation or elimination. - Waste producers.
ACTIVITIES	- Discussion based in waste images

Training modules content

- Level 3: Legal requirements

TITLE	WASTE – LEGAL REQUIREMENTS
LEARNING TARGET	- Legal structure - Generation and waste storage at production point. - Legal requirements for waste producers. - Legal requirements in waste management. - Acceptance criteria for waste.
ACTIVITIES	- Fulfil the different steps to correctly manage a waste.

Training modules content

- Level 4: Analysis and improvement

TITLE	ENVIRONMENTAL EVALUATION
LEARNING TARGET	- Environmental management system - Identification of the environmental aspects. - Environmental evaluation. - Environmental objectives and targets. - EMS model
ACTIVITIES	- Perform an environmental evaluation of an aspect related to the work place.

NIVEL 1
QUÉ GENERAMOS

- Materiales, sustancias u objetos sobrantes de cualquier operación, actividad o proceso productivo en sus procesos intermedios de producción o en su consumo final

- JERARQUÍA EUROPEA EN LA GESTIÓN DE RESIDUOS
  - Eliminación.
  - Valorización.
  - Reciclado.
  - Preparación neutralización.
  - Prevención

NIVEL 2
CÓMO SELECCONAR LO GENERADO

- RECICLAJE

Someter una materia o un producto ya utilizado a un ciclo de tratamiento para obtener una materia prima o un nuevo producto

- VERTEDEROS

El vertido es el procedimiento de eliminación que recibe el mayor volumen de residuos no peligrosos y peligrosos (tratamiento previo)

- INCINERADORAS

Se realiza en hornos con aprovechamiento o no de la energía producida(valorización energética.)

NIVEL 3
CÓMO GESTIONARLO

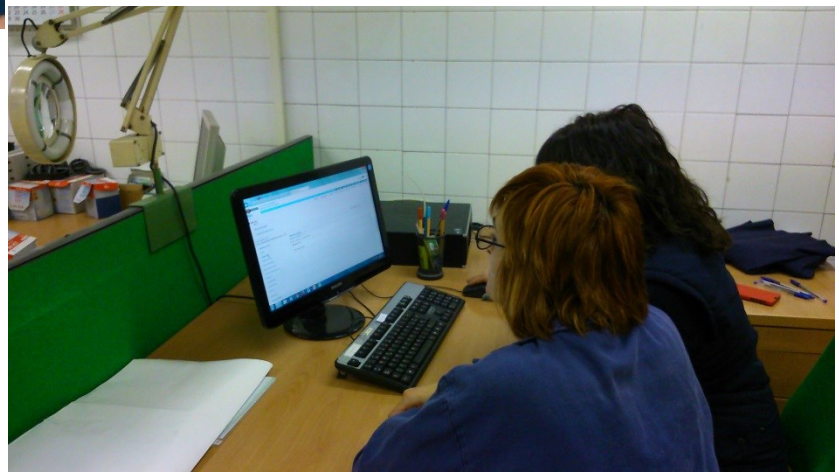
- OBLIGACIONES DE LOS PRODUCTORES DE RP
  - Segregación
  - Envasado
  - Almacenamiento
  - Etiquetado

- GESTIÓN ADMINISTRATIVA (VÍA IKS)

- GESTIÓN DE RESIDUOS
  - Recogida
  - Transporte
  - Tratamiento

NIVEL 4
QUÉ PODER MEJORAR

Example of a training activity.



Preliminary evaluation and conclusions

- Waste sensibility at work place lower than at home level. Waste is assumed as inherent to the industrial activity.
- Operators are not aware of the complexity of waste management procedures.
- Environmental related topics are of the interest of the majority of people who has take part in the training modules.
- Operators trained in the basic modules (module 1 and 2) have requested to be trained in advanced modules (module 3 and 4).
- The practical exercises performed after the theoretical presentation play an important role to fix concepts in participants. In each of the sessions this point has generated a “live” discussion among participants.

Program evaluation KPI

After the training program is finished, how to evaluate the impact of the activity in the environmental performance of the factory?

- Audit of waste “quality” before Vs. after (Impropers measurement)
- Evaluation of spills situation in fluid waste areas.
- Number of no/incorrectly labelled material at waste storage area.
- Improvement proposals in waste management transmitted to Environmental technician after realization of trainings.
- ……..

Each organization has to define some KPI to confirm the positive influence of the methodology.

Thank you very much for your attention