WP 2

Inventory of Existing Maintenance Technologies

Peter Coleman

Gateshead College

The Interreg IVB North Sea Region Programme

Investing in the future by working together for a sustainable and competitive region

European Union The European Regional Development Fund

Name of technology: Hydraulics

Description
24 of the companies surveyed had a training requirement for fluid power. The training needs ranged from basic assembly and reading drawings, through to fault finding and diagnostics.

Field of application
Nissan Motor Manufacturing UK and Smiths Electric vehicles were two companies assembling motor vehicles. The remainder of the companies surveyed were mainly component parts suppliers forming part of the motor manufacturing supply chain.

Material
Mainly applicable to the processing of materials.

Time
The technology of Hydraulics and fluid power is well established and has been used for many years in industry.

Scope
The technology is very common and used widely in all disciplines within industry. The questionnaire used did identify a skills gap within the organisations surveyed.

Maintenance type
The smaller companies tend to employ a multi skilled technician to look after a range of maintenance areas. These are reactive in their maintenance role, responding to breakdowns and requests for service. The larger companies, particularly in automotive areas, tend to employ more advanced preventative and predictive techniques.

Maintenance activity
Condition monitoring was an area that the larger organisations were using, although limited in some places. The questionnaire proved that a basic understanding in Hydraulics and Fluid Power problem solving was now required in most organisations.

Sources
The sources were identified through Gateshead Colleges Engineering department employer / organisation contacts.

Name of technology: Break Down Repairs

Description
21 of the companies surveyed used breakdown repair as their maintenance strategy. Again this proved a skills shortage within the organisation to carry out the required Planned Preventative maintenance.

Field of application
Nissan Motor Manufacturing UK and Smiths Electric vehicles were two companies assembling motor vehicles. The remainder of the companies surveyed were mainly component parts suppliers forming part of the motor manufacturing supply chain.

Material
Mainly applicable to the processing of materials.

Time
The strategy of breakdown repair is used in many companies not through choice but because of bad planning and skills shortage in the maintenance department...

Scope
The strategy is very common and used widely in all disciplines within industry. The questionnaire used did identify a skills gap within the organisations surveyed.

Maintenance type
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Name of technology: Total Preventative Maintenance (TPM)

Description
4 of the companies surveyed used Total Preventative Maintenance as part of their maintenance strategy. These were identified as companies that wanted to improve their overall efficieny by involving all persons with the maintenance role and continue to introduce best practice into their organisation.

Field of application
Nissan Motor Manufacturing UK and Smiths Electric vehicles were two companies assembling motor vehicles. The remainder of the companies surveyed were mainly component parts suppliers forming part of the motor manufacturing supply chain.

Material
Mainly applicable to the processing of materials.

Time
The strategy of Total Preventative Maintenance is a strategy that has been used by a number of organisations for some time now and should be followed by all organisations. This could be made available, by the up skilling of those persons in the organisation for example manufacturing staff and shop floor workers..

Scope
The strategy is common and used widely in all disciplines within industry. The questionnaire used did identify a skills gap within the organisations surveyed.

Maintenance type
The smaller companies tend to employ a multi skilled technician to look after a range of maintenance areas. These are reactive in their maintenance role, responding to breakdowns and requests for service. The larger companies, particularly in automotive areas, tend to employ more advanced preventative and predictive techniques.

Maintenance activity
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Sources
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Name of technology: Routine Servicing

Description
2 of the companies surveyed used Routine Servicing as part of their maintenance strategy. These were identified as companies that had invested further in their companies with new machines and had introduced service contracts as part of their maintenance strategy.

Field of application
Nissan Motor Manufacturing UK and Smiths Electric vehicles were two companies assembling motor vehicles. The remainder of the companies surveyed were mainly component parts suppliers forming part of the motor manufacturing supply chain.

Material
Mainly applicable to the processing of materials.

Time
The strategy of Service Contract maintenance is a strategy that has been used by a number of organisations for some time now. Where organisations invest in new machines it has become normal through the shortage of skills to introduce this type of contract.

Scope
The strategy is common and used widely in all disciplines within industry. The questionnaire used did identify a skills gap within the organisations surveyed.

Maintenance type
The smaller companies tend to employ a multi skilled technician to look after a range of maintenance areas. These are reactive in their maintenance role, responding to breakdowns and requests for service. The larger companies, particularly in automotive areas, tend to employ more advanced preventative and predictive techniques.

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Sources
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Name of technology: Screwing

Description
7 of the companies surveyed used Screwing technology as part of their joining process. This Screwing technology ranged from automatic screw feeders to hand held screw drivers used by trained persons.

Field of application
Nissan Motor Manufacturing UK and Smiths Electric vehicles were two companies assembling motor vehicles. The remainder of the companies surveyed were mainly component parts suppliers forming part of the motor manufacturing supply chain.

Material
Mainly applicable to the processing of materials.

Time
Screwing technology is a process that has been used for a number of years to join materials together.

Scope
This type of joining technique is common and used widely in all disciplines within industry. The questionnaire used did identify a skills gap within the organisations surveyed.

Maintenance type
The smaller companies tend to employ a multi skilled technician to look after a range of maintenance areas. These are reactive in their maintenance role, responding to breakdowns and requests for service. The larger companies, particularly in automotive areas, tend to employ more advanced preventative and predictive techniques.

Maintenance activity
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Sources
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Name of technology: Soldering

Description
2 of the companies surveyed used Soldering technology as part of their joining process. This Soldering technology ranged from robotic automatic solder feeders to hand held solder irons used by trained persons.

Field of application
Nissan Motor Manufacturing UK and Smiths Electric vehicles were two companies assembling motor vehicles. The remainder of the companies surveyed were mainly component parts suppliers forming part of the motor manufacturing supply chain.

Material
Mainly applicable to the processing of materials.

Time
Soldering technology is a process that has been used for a number of years to join materials together.

Scope
This type of joining technique is common and used widely in all disciplines within industry. The questionnaire used did identify a skills gap within the organisations surveyed.

Maintenance type
The smaller companies tend to employ a multi skilled technician to look after a range of maintenance areas. These are reactive in their maintenance role, responding to breakdowns and requests for service. The larger companies, particularly in automotive areas, tend to employ more advanced preventative and predictive techniques.

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Name of technology: Total Preventative Maintenance (TPM)

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Sources
The sources were identified through Gateshead Colleges Engineering department employer / organisation contacts.

Name of technology: Welding

Description
22 of the companies surveyed used Welding technology as part of their process. This welding technology ranged from Robotic welding to hand held welding guns used by trained persons.

Field of application
Nissan Motor Manufacturing UK and Smiths Electric vehicles were two companies assembling motor vehicles. The remainder of the companies surveyed were mainly component parts suppliers forming part of the motor manufacturing supply chain.

Material
Mainly applicable to the processing of materials.

Time
Welding technology is a process that has been used for a number of years to join materials together.

Scope
This type of joining technique is common and used widely in all disciplines within industry. The questionnaire used did identify a skills gap within the organisations surveyed.

Maintenance type
The smaller companies tend to employ a multi skilled technician to look after a range of maintenance areas. These are reactive in their maintenance role, responding to breakdowns and requests for service. The larger companies, particularly in automotive areas, tend to employ more advanced preventative and predictive techniques.

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