
13ο MAINTENANCE FORUM

11.10.2019

**Βελτιώνοντας το κόστος συντήρησης,
την ενεργειακή απόδοση και την παραγωγικότητα
του υδραυλικού εξοπλισμού στη βιομηχανία**



Νεκτάριος Τσώνος

Διεύθυνση Πωλήσεων Λιπαντικών Shell

Περιεχόμενα

1. Εκτίμηση του περιθωρίου μείωσης του κόστους συντήρησης
2. Βασικοί άξονες ενεργειών μείωσης κόστους και αύξησης παραγωγικότητας
 - Επιλογή λιπαντικού
 - Διαχείριση λίπανσης
3. Παραδείγματα βελτίωσης παραγωγικότητας, κόστους συντήρησης και ενεργειακής απόδοσης υδραυλικού εξοπλισμού στη βιομηχανία πλαστικού



Υπηρεσίες & Όφελος

Τα τεκμήρια



\$174m

Εξοικονόμηση,
Διεθνώς, μέσω των
υπηρεσιών μας
από 2009 - 2018



700+

Υψηλής
τεχνογνωσίας
Μηχανικοί
Λίπανσης, Διεθνώς



24/7

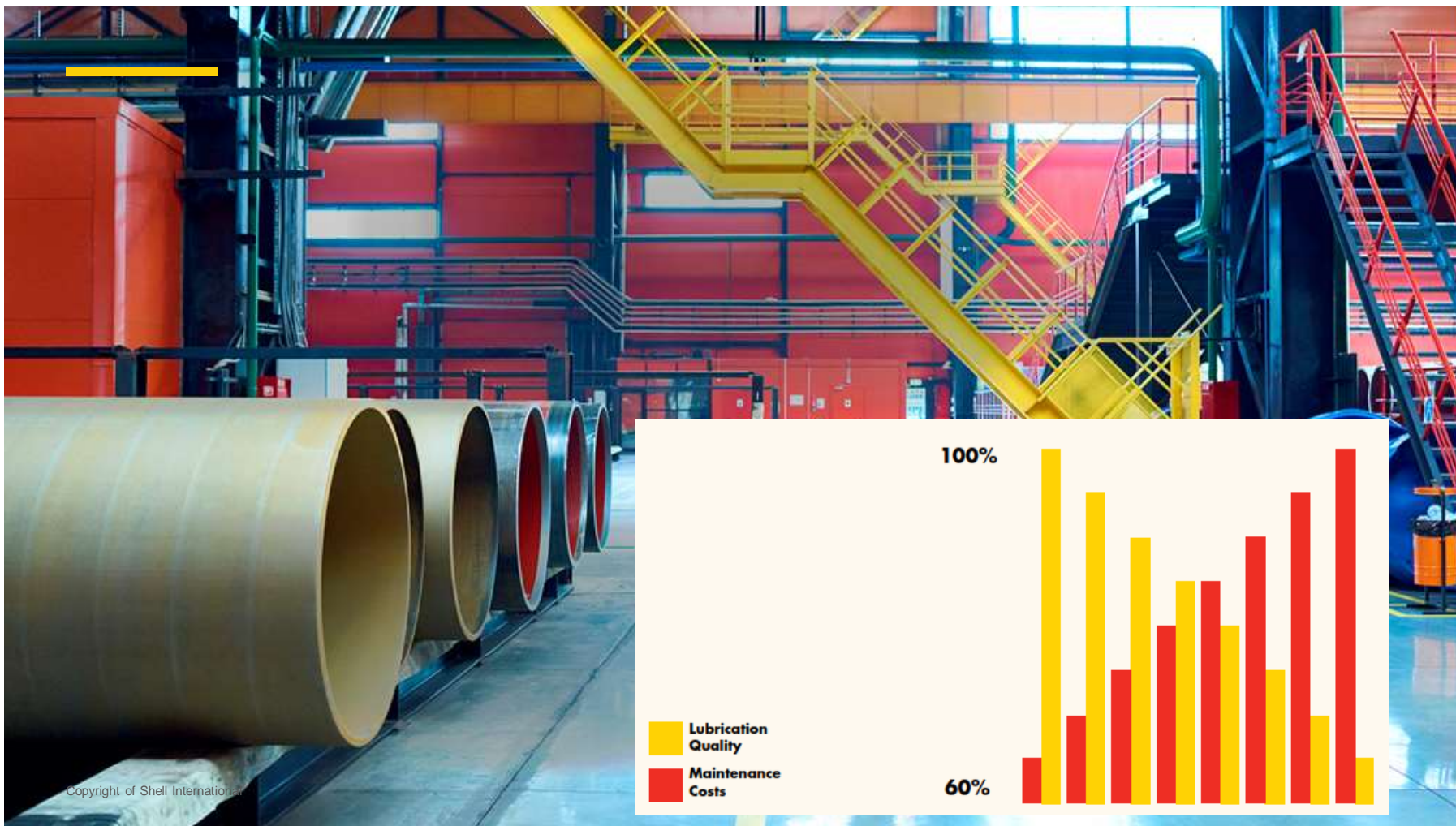
Διαθεσιμότητα
ηλεκτρονικών
εργαλείων
υποστήριξης



30

Έτη εμπειρία
εργαστηριακών
αναλύσεων &
αξιολογήσεων

Περιθώριο μείωσης του κόστους συντήρησης

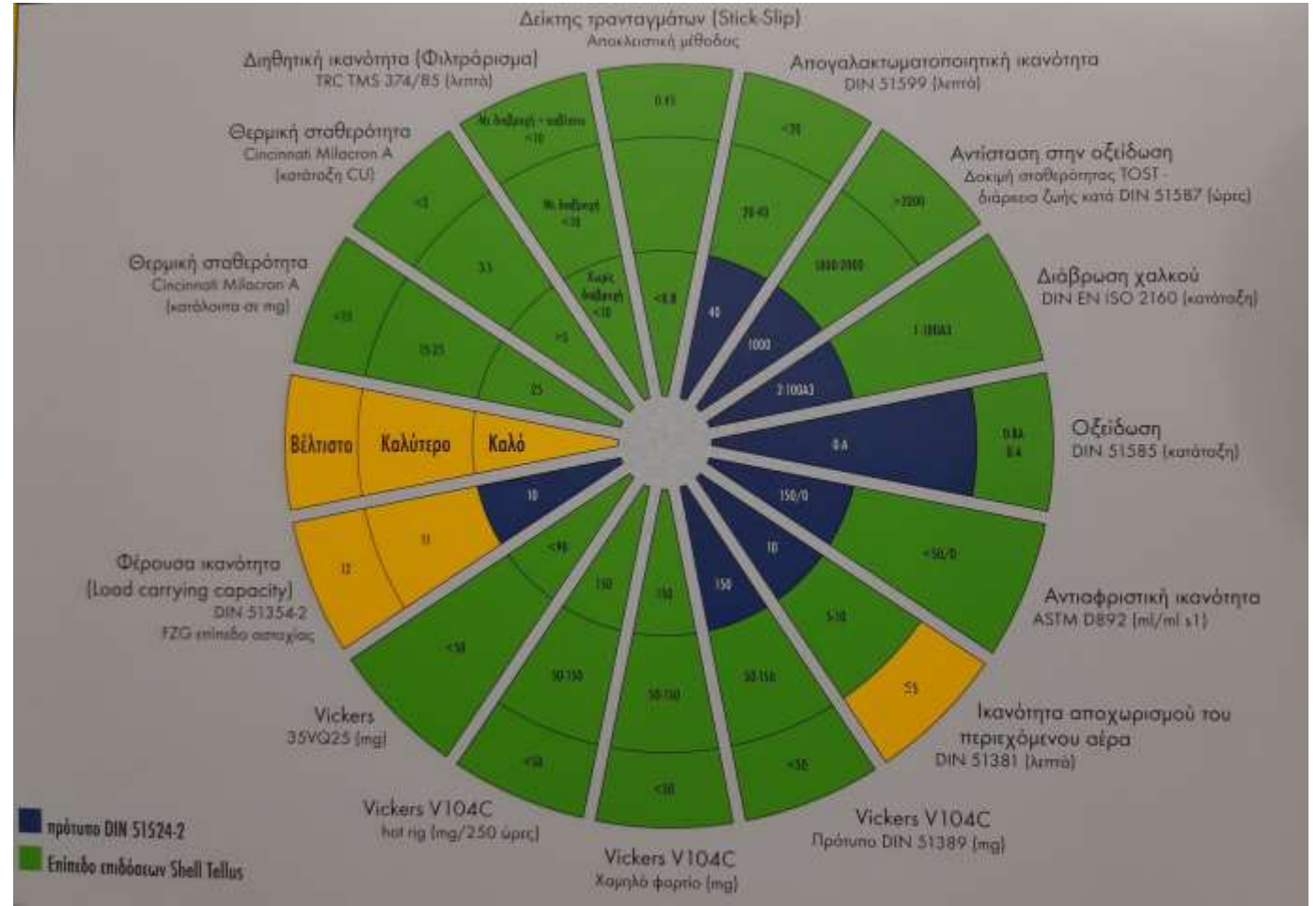


Επιλογή Λιπαντικού

Figure 6 shows an example of a visual assessment of pump components that have been operated using hydraulic fluids that are normally available on the market. Fluid A did not pass the fluid test due to the wear properties that occurred. Fluid B demonstrates wear properties after 510 hours, which successfully passed the fluid test.



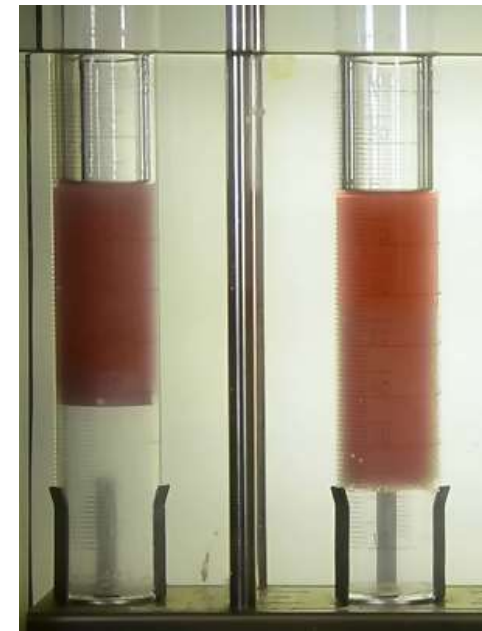
Figure 6a+b. On the one hand, Bosch Rexroth tests show fluids that have led to significant damage after fewer than 100 operating hours. Other hydraulic fluids cause no wear whatsoever after 510 hours. (Copyright: Bosch Rexroth AG).



Επιλογή Λιπαντικού

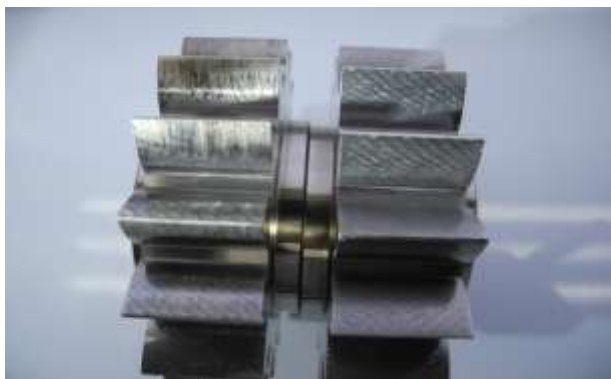
Ασυμβατότητα με στεγανοποιητικά → Διαρροές

Μειωμένος διαχωρισμός νερού → διάβρωση & μείωση ζωής εξοπλισμού & λιπαντικού



Σχηματισμός Varnish λόγω θερμικής καταπόνησης → κόλλημα βαλβίδων

Μειωμένη ικανότητα αντοχής σε φορτία → φθορά αντλιών



Θερμική καταπόνηση → φθορές, βούλωμα φίλτρων, μείωση ζωής εξοπλισμού & λιπαντικού

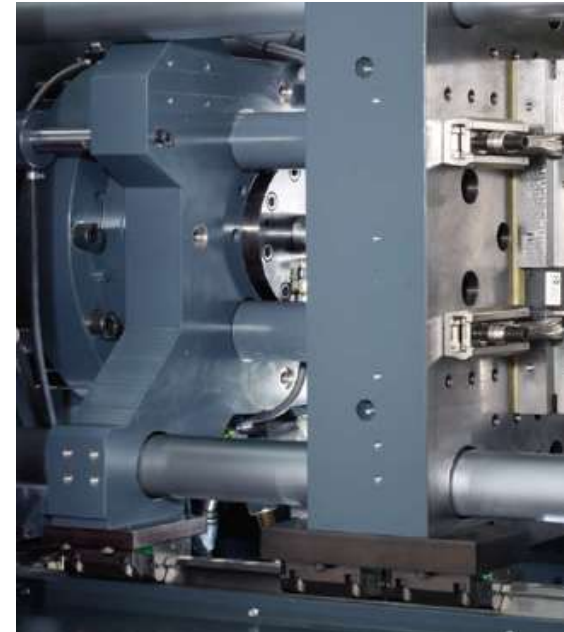
Διαχείριση Λιπανσης

1. Κατάλληλη αποθήκευση & χειρισμός
2. Σωστό σημείο εφαρμογής
3. Κατάλληλος χρόνος
4. Σωστή ποσότητα
5. Συστηματική καταγραφή, παρακολούθηση & ανάληψη ενεργειών
6. Κατάλληλα εκπαιδευμένα στελέχη



Εταιρική προσέγγιση αναβάθμισης της λίπανσης

1. Υποστήριξη - Δέσμευση της διοίκησης
2. Ορισμός επικεφαλής & ομάδας
3. Θετική συνεργασία με προμηθευτή λιπαντικών
4. Πραγματοποίηση ανάλυσης για ποσοτικοποίηση & ορισμό προτεραιοτήτων
5. Ορισμός μετρήσιμων στόχων



General Manufacturing company saves 78% with Shell Tellus S2 VX

CHALLENGE

Jubilee Clips manufacture high quality metal hose clamps for a variety of applications. To produce the hose clamps, Jubilee Clips employ 12 hydraulic power packs (operating 24 presses).

On the incumbent product, ODI's were very short (6 months) resulting in unnecessary expenditure on replacement hydraulic fluid and filters. In addition, during summer months the incumbent hydraulic product would overheat, causing a lack of hydraulic pressure and a shut down to machines, impairing production runs.



SOLUTION

The recommended solution was Tellus S2 VX 46. The high viscosity index hydraulic oil is designed to cope with high temperatures and continuous operations to give customers a reliable yet cost effective solution.

OUTCOME

Since the change, ODI's have been increased to 24 months, with no downtime caused by overheating during summer months.

VALUE

Jubilee Clips recognized an annual saving of over \$5,400; a saving of over 78% based on previous lubricants related costs! Additionally, productivity was improved significantly as the hydraulic power packs no longer shut down due to overheating in summer months.

The savings indicated are specific to the calculation date and mentioned site. These calculations may vary from site to site and from time to time, depending on, for example, the application, the operating conditions, the current product being used, the condition of the equipment and the maintenance practices.

General Man. company saves \$12,600 with Shell Tellus S3 M 46

CHALLENGE

RCF is a company manufacturing and marketing professional and commercial audio applications products. RCF needed to stop the production due to an ODI every 6 months to change the rubber seals.

SOLUTION

After a deep analysis, Socogas (Shell distributor) with Shell technical staff proposed Shell Tellus S3 M hydraulic product with the goal of doubling ODIs and better preserving the seals.

OUTCOME

Customer with Shell technical support achieved their target. Monitoring the oil status periodically, RCF was able to increase ODIs to meet their needs (from 2,200 hours to 5,000 hours)



VALUE

Through the maintenance and operating cost benefits associated with long oil life, the company has identified estimated annual savings of \$12,600.

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Shell Tellus S4 ME reduces electrical consumption by 11%

CHALLENGE

Huonker Hungary Kft. is a producer of fittings, gears and parts produced by plastic injection molding.

The company is committed to innovations and an innovative approach. It takes responsibility for the environment (ISO 14001) and therefore launched a power-management program and looked for energy savings.

SOLUTION

The company used Shell Tellus S3 M 46 in 20 Arburg PIM machines, but was interested in lowering energy consumption further. A test with Shell Tellus S4 ME 46 was proposed.

A flushing procedure was done before switch to Tellus S4 ME 46, by using 20% of a flushing fluid (Tellus S2 MA 46), to ensure that the full performance benefits of the new product could be captured.

OUTCOME

The test showed a reduction in electric consumption of 11%. Shell Tellus S4 ME 46 also made it possible to double the oil drain intervals.

Based on measured energy savings together with the extended oil drain interval, a total of \$934 could be saved per year per machine.

huonker



VALUE

As a result, the company has benefitted from \$18,680 in savings per year.

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AMARAY extended ODI and cut energy costs with Tellus S4 ME

CHALLENGE

AMARAY, a leading plastics processing company in Germany; producing DVD cases; was keen to increase the oil drain interval, decrease energy use and increase productivity

SOLUTION

AMARAY, a leading plastics processing company in Germany; producing DVD cases; was keen to increase the oil drain interval, decrease energy use and increase productivity

OUTCOME

An **exceptional ODI over 52.000 hrs**, **energy savings by %4**, overall decreased maintenance costs due to decreased downtime, consumables and longer oil

VALUE

As a consequence of the mentioned outcomes, the company reported a total annual saving of over 4.850 Euro/machine.

DVR.HYF00264

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Συνοπτικά παρουσιάστηκαν

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Q&A