



The BIOil Specialist

Nothing lasts forever, neither in the nature nor in the human life,
only the transition, the change is forever.

August Bebel



The first hydraulic oil for the biological sector and the food industry

KLEENOIL®
Microfiltration

PANOLIN®
Swiss Oil Technology **+**

In this issue:

PANOLIN ORCON SYNTH E



Wonders of the world
with KLEENOIL & PANOLIN



New "Blauer Engel"



CC Microfiltration



Outside the Box

Dear Readers

After more than 25 years being an independent entrepreneur with a worldwide field of activities I am used to face a lot of political and economic questions. The most frequent question in the recent past when I am in a foreign country is: „How do you in Germany manage to be so good?“, and in Germany: „How long will this good period last for us here in Germany?“. Simple questions for which there are no simple answers.



Chairman of the KLEENOIL PANOLIN AG

Immediately we think about virtues like assiduity, sense of duty and modesty. But we immediately run the risk of being arrogant. In fact in other places there also are assiduous, dutiful and modest people, who in spite of these virtues do not find themselves in a that good position as we do. Our politicians with their self-manifestations often unerringly “drop a brick”. So we see our chancellor on covers of Greek newspapers with a Hitler beard. Steinbrücks cavalry against Switzerland or dismissive descriptions of democratically elected politicians in Italy are also good examples for it.

I am sure that we here in Germany are practising something really rare, because we do not do everything we would be able to. This virtue is also an important pillar of our stability. To be fair, it should be mentioned that not everyone practising this reluctance is doing it by his own choice. As losers of the last two world wars a lot of sanctions have been imposed to us, which in parts are still valid up to today. This is the reason why we, rather than other people question ourselves whether the things we can do are right from an ethical, moral or evolutionary point of

view. For sure, we also are contracting less debts than we could. All in all we are currently profiting of our own reluctance (or the one which has been imposed to us).

This means it is a benefit not to do everything which one would be able to. This does not mean that one should reduce one’s own progress. Quite the contrary, the challenge is to control the progress so that everything oneself created, does not get out of control. There are a lot of examples: genetic engineering, weapon systems, debts or biotechnology.

Especially the biotechnology offers possibilities which are seductive and dangerous at the same time. **“Bacteria are the basis for the new eco-fuels”**, can be read in various professional publications. This refers to bacteria-cultures being able to convert water into a raw material for fuel. Wow! But what are we going to do if something like that gets out of control and we suddenly have a lot of fuel but no more clean water? A horrible thought. Let’s just hope that also in this case reason, responsibility and reluctance will prevail.

Before cultivating bacteria for the creation of synthetic carbon hydrides the waste of the available resources can be pushed further. Still material stocks are being relocated on trucks, in most of the cars there is only one person and an oil change is still considered as technically indispensable. “Incredible!” I can only say, after long-term experiences with systems without oil change and the simple knowledge that the human being, like all mammalian gets along his whole lifetime with only one „filling of blood“. Sometimes less is even more.

Yours

Milorad Krstić
Chairman of the KLEENOIL PANOLIN AG

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PANOLIN ORCON SYNTH E

A hydraulic oil for the biological sector and the food industry

PANOLIN ORCON SYNTH E is a necessary evolutionary further development of the biodegradable PANOLIN oils being available up to now.

With the product PANOLIN ORCON SYNTH E the company PANOLIN for the first time ever offers a rapidly biodegradable oil for the biological sector and the food grade industry. It combines the characteristics of the rapidly biodegradable hydraulic oils from the PANOLIN HLP SYNTH range and the PANOLIN ORCON oils which up to now have been offered for the food grade sector. Its better



lubricating effect results into a higher efficiency, and in combination with that, lower oil temperatures. In the end that means: less energy consumption and longer oil life-time.

In three years of research work, it was possible to combine two characteristics which up to now were incompatible. In PANOLIN ORCON SYNTH E in one product the compliance of the severe requirements of the NSF-H1-Certification in the food industry as well as the biodegradability are combined. PANOLIN ORCON SYNTH E is based on saturated synthetic esters. This product also is a high performance hydraulic oil with long-term suitable properties. It shows similar qualities as those the customers know from their use of PANOLIN HLP SYNTH since more than 25 years.

In numerous application areas of hydraulically driven machines biodegradable and food grade certified oils have to be used. This can be common construction machines being used in the harvesting sector or equipment being used for food. In the same way the oils are also being used

in industrial trucks which are working in warehouses and production halls for food. Their use seems to be rather compulsory in harvesting equipment or machines working in drinking water protection areas. In this sector the prescriptions known from the food processing are already applicable as e. g. the Hazard Analysis and Critical Control Points (HACCP). Such prescriptions and certifications from their basic principle have a clear target: In case in food harmful or toxic substances are being determined it has to be able to trace back the whole processing chain up to the production.

The recurrent food scandals have sensibilized the consumers, the public and the legislative authorities. For the possible responsible causer the point is to be able to prove that he is not the causer the authorities are looking for. Especially for this reason it is necessary that in the food grade sector only admissible operating fluids are used in the respective machines.

As supplier of such products the company KLEENOIL PANOLIN AG is facing a gigantic educational task. "It is the same situation we had when we started launching the first rapidly biodegradable oils more than 25 years ago" says the chairman of the company KLEENOIL PANOLIN AG, Milorad Krstić. After more than three years of work in the logical and necessary further development of PANOLIN ORCON SYNTH E he does no longer speak about a revolutionary new invention but about a necessary evolutionary further development.



Considering the motto "What is good for the nature is also good for our health" one could presume that rapidly biodegradable oils could be classified as innocuous for the human health. "This motto is wrong in itself", says Milorad Krstić. "Only after precise examination it becomes clear that nearly everything which is brought to agriculturally used land – whether it is a biological or chemical product – in its form is harmful for the human health". Substances which sometimes are indispensable for the production of food only lose their direct harmfulness for the human organism due to biogenic processes, i. e. biologic transmutation or degradation.

Wonders of the world and giants

PANOLIN hydraulic oils and KLEENOIL Micro-filtration are applied around the world in drives in hydraulic systems of working ships as well as gigantic wheel loaders and excavators.

London Eye: The hydraulic systems of the worlds largest big wheel, also known as Millenium Wheel, the London Eye on the South bank of the River Thames with its 135 meters of height since the year 1999 is filled with PANOLIN HLP SYNTH. In March 2000 the attraction has been inaugurated. Since that day up to 25 passengers in one of the 32 capsules from the highest point can see for around 40 kilometres above London. Up to now, every year 3,5 million people have visited the big wheel with a weight of 2100 tons. A London Eye experience lasts 30 minutes. The first oil change had to be realized only after more than 100.000 operating hours. For reasons of water pollution control the operators have decided to fill in a rapidly biodegradable oil.

Information: www.londoneye.com



Panama Canal: In the 170 aggregates which in the future will open and close the flood gates of one of the mostly frequented waterways around the world, the rapidly biodegradable PANOLIN HLP SYNTH is filled in too. Until 2014 the 81,6 kilometres long Panama Canal which leads from the Atlantic to the Pacific Ocean will be expanded. On this occasion new, water saving water gate systems will be implemented. The Bosch Rexroth AG from Lohr on the Main is supplying the drives and necessary control engineering for the plants being built by the South Korean company Hyundai Samho Heavy Industries. They are filled with PANOLIN oil. The delivery up to now represents the biggest single order of one end-customer in the 25-year old history of the company KLEENOIL PANOLIN AG.

Information: www.boschrexroth.com



Niagara Falls: The Niagara Falls which are located between the U.S. State of New York and the Canadian Province of Ontario with a vertical drop of 58 metres also are supplied with PANOLIN oil. To be able to pass the water falls of the Niagara River (connection from the Lake Erie to the Lake Ontario) large transport ships have to pass the Welland Canal with an extension of 42 kilometres and being located twelve kilometres westward in the Province of Ontario. This canal overcomes a difference in height of 99,5 metres. In its fourth form it has been build between 1919 and 1932. The aggregates of the eight hydraulically driven flood gates with a weight of 496 tons each are filled with PANOLIN HLP SYNTH. The U.S. State of New York in 1885 declared the Niagara Falls to be a protected natural area, and Canada followed this example one year later.

Information: www.wellandcanal.com



Mont Saint Michel: France's famous monastery island in the Normandy attracts 3,5 million visitors every year. In 1979 it has been added to the list of UNESCO World Heritage Sites. But the periodical high tide carries a lot of silt. Especially the tidal causeway built in 1869 to the rocky island in the British Channel encourages the silting. In 1995 a renaturation project was started which includes the construction of a dam in the river Couesnon which is flowing into the ocean in front of the „Wonder of the Western World“. The plant which has started its operation in 2009 significantly contributes to avoid the silting of the bay. It throws the sand back into the ocean with pressure. Experts are sure that the water level will increase by 70 centimetres. The aggregates of the dams are filled with biodegradable PANOLIN HLP SYNTH oil.

Information: www.ot-montsaintmichel.com



Gold-digger Hitachi: In the Peruvian Yanacocha mine, with its more than 250 square kilometres of digging area one of the largest gold mines of South America, since April 2012 two large bucket excavators HITACHI EX 2500 are being employed. The two excavators 09 and 010, driven by 1.400 PS Cummins motors, with a height of 7,2 metres and a width of more than 6 metres and a working weight of 249 tons per shovel filling, can dig off 15 cubic metres or 27 tons of ground. The two HITACHI EX 2500 are equipped with KLEENOIL fuel-microfiltration units (each 2x4S-24V-1000). The rigs are installed above the fuel tanks. During an inspection at excavator 09 in May 2012, after 1000 operating hours it has been determined, that the KLEENOIL rig together with the original filter systems significantly reduce the risk of wear at the pumps of the Common-Rail-Injection System.



Caterpillar-Giant: The wheel-loader 992K of the American manufacturer Caterpillar works in the site Burglengenfeld of the company HeidelbergCement AG. In one of the largest cement plants of the company in the Bavarian administrative district Schwandorf the CAT with a weight of 97,2 tons, driven by a 904 PS diesel motor is working in the quarry. Its hydraulic system and the motor circuit are filled with PANOLIN oils, additionally KLEENOIL by-pass filter rigs with ICC-monitoring are installed. Oil fillings: 310 litres in the system of the braking- and steering hydraulics, 980 litres in the working hydraulics tank and 120 litres in the motor circuit. KLEENOIL filter rigs with ICC-monitoring: In the braking- and steering hydraulic SDU-H350-ICC-H5, working hydraulics SDU-H350 RK-TWIN-ICC-H5 and motor circuit SDU-M8 RK-TWIN-ICC-M8. Therefore in this machine the complete Integrated Fluid Concept is applied which has been developed by the company KLEENOIL PANOLIN AG and is especially recommended for large machines.



A “new generation” of “Blauer Engel – Blue Angel”

The reformation of the German Eco-Label has begun

In this year and after the preceding official hearings (the last ones on December 3rd and 4th, 2012) at the German Federal Environmental Agency in Berlin, the eco-label “Blauer Engel” for various rapidly biodegradable lubricants is experiencing a necessary and reasonable reformation.

The fundamental innovation is, that different product groups, such as loss lubricants (e. g. chain saw oils), lubricating greases as well as gear and hydraulic oils can receive a unitary „Blauer Engel“ RAL-UZ 178 – because rapidly biodegradable. The revised or rather new requisition criteria are extensive and comprehend a lot of material restrictions. So the users can presume that products which have been awarded with the new “Blue Angel”, if applied according to its designated use, normally are harmless or however only result in a minimal damage to the environment.

The rather short life spans of the new requirements of four years furthermore guarantee that the technical developments can continuously be considered. Referring to the biodegradability as a fundamental requirement the existence of the relevant OECD Test Methods will still be maintained. The CEC Test Methods, the antiquated



CEC-L-33-A-93 as well as the modified CEC-L-103-12 are considered as inappropriate to be consulted as a sufficient proof for the biodegradability.

In the same way as the expiring, also the new assignation guidelines for the „Blue Angel“ do not presume that a certain part of renewable raw materials has to be contained in such products. Nevertheless the new assignation guidelines consider the indication of the part of renewable raw material which is determined by the Radiocarbon Method (ASTM D-6866). In this point the difference to the European Eco-Label (EEL) – widely known as „Euro-Marguerite – will be maintained. In view of the fact that numerous discussions about the use and the sustainability of renewable raw materials are not completed yet, the new assignation guidelines also in this point are positioned in an up to date way.

The existing assignation guidelines maintain their validity until 31.12.2013. Starting from the year 2014 exclusively the new assignation guidelines RAL-UZ 178 will be valid. The “Blue Angel”, which basically is a solely German eco-label still has an internationally high reputation as nearly no other national eco-label.

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A new trade mark of the company KLEENOIL PANOLIN AG

There were two essential and crucial reasons for the launch of the trade mark "CC Microfiltration" in the course of last year:

1. Basing on the KLEENOIL Microfiltration which has been successfully used for more than 25 years it was evidently necessary to create a product line in the lower price segment. With this trade mark we are offering filter rigs with an absolutely simple technical equipment. Referring to the handling and use from the filtration technique point of view they are limited to the absolutely necessary.
2. For the other countries throughout the world it was necessary to have a new trade mark in order to be able to sell the established KLEENOIL technology also in countries where due to uncleared trade mark rights the original denomination is disputable.

For customers in Germany and Central Europe this means, that in the majority of the cases the trade mark "CC Microfiltration" stands for simple filter rigs with an absolutely only basic equipment and therefore a favourable price. The filter rigs with extensive technical equipment, as for example electronic application monitoring, automatic particle counting, quantitative water determination, automatic switch-off and lots more, will still be available under the trade mark "KLEENOIL Microfiltration". Both trade marks are based on the identical filtration technique. The centrepiece is represented by the depth filter elements based on the filter media cellulose, polypropylene and polyester. The filter media and the specially aligned construction of the filter housing ensure a highly efficient elimination of water and solid particles up to 1 μm . The filtration is carried out at low pressure ranges between one and maximally four bar to protect the oil. By eliminating the contaminants with abrasive and catalytic effect wear is minimized and the oxidative-catalytic reactions in the oil are decelerated. CC microfilter cartridges are suitable for

filtration of all non water soluble, fully or partially synthetic or mineral oil based oils and fuels.

The filtration time until the lowest possible cleanliness class (e. g. 15/13/10 according to ISO 4406) can be achieved depends on the viscosity and the contamination level of the fluid.

Considered in total the oil maintenance with "CC Microfiltration" is a very good possibility to decelerate the ageing of the oil, extend oil change intervals and protect components.



CC Microfiltration:
High performance and favourable price
Type FR-CC-4



Exhibitions – time for answers

The direct contact and the personal conversation are the best prerequisites to get substantial answers. Also for this reason the company KLEENOIL PANOLIN AG is represented at numerous exhibitions of various sectors with specialized staff.

So the company KLEENOIL PANOLIN AG successfully exhibited at the MAINTENANCE in Dortmund with its focus on maintenance. At the VDBUM seminar in Braunlage Milorad Krstić impressed numerous visitors with his

lecture “Water is vital – the first bio-hydraulic oil that complies with the severe NSF H1-requirements”. At the exhibitions the novelties regarding oil and hydraulic fluids as well as the latest techniques concerning the filtration are presented. For the first time the company KLEENOIL PANOLIN AG at the bauma 2013 in Munich presents a novelty: PANOLIN ORCON SYNTH E – biodegradable and food grade. But most of all the professional exchange and answering of open questions can be realized directly, immediately, personally and with high competence.

Exhibitions KLEENOIL PANOLIN AG		
Date	Exhibition	Place
20.02.-21.02.2013	Maintenance	Dortmund
26.02.-01.03.2013	VDBUM Seminar	Braunlage
08.04.-12.04.2013	MDA-Hannovermesse	Hannover
15.04.-21.04.2013	BAUMA	München
28.05.-30.05.2013	IAF Münster	Münster
05.09.-07.09.2013	Tiefbau Live	Baden Airpark
27.09.-29.09.2013	Forst & Holz	Chemnitz
Exhibitions PANOLIN AG (in the German-Speaking Countries)		
18.06.-21.06.2013	Suisse Public	Bern
15.08.-18.08.2013	Forstmesse	Luzern
07.11.-10.11.2013	Transport CH	Bern



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