

STEEL AND ALUMINUM



LUBRICATION SOLUTIONS FOR STEEL AND ALUMINIUM





LUBRICATION SATELLITE

The "SATELLITE" control panel is an intermediate panel made up of an SMX divider with calibrated elements, an air treatment unit, pressure switches, flow meters, and mixing valves. This panel is installed between the oil system and the mill stands. Depending on the overall length of the system, the quantity and position of the stands, and the number of bearings to be lubricated, one or several satellite stations can be implemented in order to increase control and reliability of the lubrication solution. The air and oil flow rates can be adjusted at the PLC incorporated on the oil system. Effectively, this can be utilized to adjust the quantity of lubricant sent to the mill stands based on use, temperature, or wear.



SPLITTER TUBES

The "splitter tube" style lubricators created by DropsA are products engineered based on the characteristics of the bearings and available ports of the rolling mill stands. The flow rate of the application is based on proportional dosage. The air/oil mixture provided from the satellite station is distributed to each of the outlets based on the displacement model and end requirement need. DropsA utilizes fluiddynamic calculation (FDC) instruments and experimental data to optimize the balancing of the output flow rate pressure in order to obtain a more accurate distribution of the air/oil flow into the lubrication end points.

SPLITTER BLOCK

The air/oil Splitter Block is a lubricant manifold that divides the flow of the air/oil mixture in equal proportions based on the number of outlets of the divider. The incoming air/oil mixture is distributed into two, four, six, or eight outlets. The main advantages stemming from the use of this air/oil distribution technology lie in the possibility of using only one main line containing air and oil. The technology used for the air/oil Splitter Block, although less accurate than volumetric technology, can achieve substantial levels of savings on initial costs, because it allows the number of lines necessary to be reduced. The splitter block is usually used to convert old grease-lubricated rolling mills to air-oil systems where the ports on the individual chock bearing cannot use splitter tubes.







OIL SYSTEM



SMX SERIES AIR-OIL DIVIDERS

Of the various types of solutions available for air-oil lubrication in rolling mills, the use of SMX air-oil dividers is a highly effective alternative to grease-lubricated systems. Air-oil solutions optimize costs, drastically reduce lubricant waste, and decrease environmental impact. The typical system that utilizes air-oil dividers include the main line, in conjunction with dual-line dividers, installed on satellite stations with cycle control.



END OF LINE PRESSURE SWITCH

The end of line pressure switch is implemented at the end of the main line to monitor correct operation of the system. The switch sends a signal to the main control system when the line pressure reaches a set calibration value, ensuring that a lubrication event occurred in a alloted amount of time.



DUAL LINE DIVIDERS

Modular dividers for dual line systems are a versatile and precise solution.

Components include a base and valves (AISI 316 Stainless steel or in AVP steel). The elements can be provided with adjustable or fixed flow.

The modular duel line dividers provide the following advantages:

- Flexibility in increasing or decreasing the number of modular elements assembled
- Time savings: the divider valves can be replaced without replacing the assembly, fittings, or tubing
- Reduction of maintenance costs: total modularity of the system allows quick and low-cost operations
- Reduction of costs for replacement components due to the interchangeability of the valves and the associated bases

All of the SUMO II, MINISUMO, MINISUMO II, etc. series pumps are available for painting following the customer's specifications, except for standard versions. These pumps are also offered in special variations in accordance to NEMA, EAC, ATEX standards for zone one and two.







The initial part of the rolling process, after the continuous casting and prior to the rolling mill, is lubricated by DropsA with grease systems and dual line dividers. Given the need to operate continuously and to guarantee maximum reliability, redundant systems are configured with pumps in standby that operate automatically, starting and stopping at regular intervals to extend the life of the motors and the most stressed elements and to reduce maintenan-ce times. Sumo 2 series pumps with 100 kg reservoirs are usually installed on skids along with the electrical equipment, instrumenta-tion and control valves (pressure switches, pressure gauges, pressu-re transmitters, solenoid valves,



ABOUT DROPSA

Automatic Lubrication: Optimization of Costs and Reduced Down Time



The use of lubrication systems is essential for machine operation, even more so when the operation functions in heavy duty environmental conditions experienced in the steel industry. The installation of an automatic lubrication system allows for reduced machine downtime, control of lubricant consumption, and the increased life of bearings, chains, and gears. Knowledge from years of experience and a widespread network of offices and dealers worldwide, DropsA provides specific solutions for all lubrication needs, including customer defined projects to installation, and after-sales support. The solutions proposed for the steel sector are applicable on the various machine types:

DropsA

Since 1946, DropsA has been producing centralized lubrication systems and components, along with continuously developing new products, and patents, that have contributed to making the lubrication sector, all over the world, more innovative and competitive.

DropsA offers a vast range of products capable of maximizing the profitability and productivity of all machinery, providing the latest technologies in terms of systems, functionality, and components. Thanks to the branches and the specialized distribution channels, DropsA provides prompt responses, support, and assistance to customers on a local and global level, guaranteeing consistent high quality standards all over the world.

DropsA Production

The production, processing, and automated assembly systems utilized in DropsA's central plant, near Milan, are equipped with an advanced quality monitoring, and product traceability system, in order to guarantee both highly efficient processing and product assembly that accurately reflects all technical specifications. Continuous investments in all areas of design, engineering, and production of the products ensure a constant improvement in the reliability of the products themselves.















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