

Advantages of UC-3N intelligent lubrication system

Usually, intelligent lubrication system consists of intelligent lubrication module, and touch screen with PLC as the heart. Although such system is called intelligent lubrication system, intelligent lubrication modules at site has no intelligent control ability at all. It just passively executes PLC's command. All control actions are depends on the commands that PLC sends via bus step by step. PLC even has to control actions such as open valve, close valve. Therefore, such intelligent lubrication is only a simple extension of PLC control functions in the space. There is following problems in such system.

1. Highly depends on PLC. Because lubrication module itself has not intelligent control capacity, all controls depend on the control heart PLC. Once there is problem in the PLC, the whole lubrication system will collapse.
2. Due to the reason all control actions are done by PLC. In order to fulfill heavy control tasks, user has to select large capacity and powerful PLC. Larger systems, this feature is more obvious. This directly results in the cost increase for control core part.
3. System highly depends on the bus communication. If there is problem in the communication, control immediately stops. In addition, because of the large amount of communication, bus is always busy, which causes the system run slowly. For some systems with many lubrication points that require high control speed, in order to guarantee real-time performance, users are forced to use Ethernet or optical fiber, which caused system cost increase dramatically.
4. Lubricating modules do not have intelligence, on-site commissioning and check status displays are not convenient, commissioning and troubleshooting need repeatedly run between the control room and the site.

Lubrication system consists of intelligent lubrication controller UC-3N can overcome these disadvantages. Lubrication controller UC-3N itself is lubrication control station that is able to complete complex lubrication control work independently. The reason we call it intelligent lubrication control station is that we added networking communication functions onto UC-3N, which enables UN-3N supports intelligent lubrication tasks. With the UC-3N-based intelligent lubrication system, each control

point is equipped with autonomous intelligence capability.

Because of this feature of UC-3N, an intelligent lubrication system can be composed by touch screen and UC-3N only. Touch-screen in this system not only acts as the traditional display interface, but also as control coordination center, which coordinate all UC-3N control stations. Unlike PLC, touch screen is only responsible for the coordination and management of the entire system running, never mind the specific control tasks, specific lubrication control works are done by UC-3N in-place at the lubricating point. Eliminating traditional PLC, which is a significant change to the traditional intelligent lubrication control system. It subverts the concept that intelligent lubrication system must use PLC as the core of control.

Advantages of intelligent lubricating system that composed by UC-3N intelligent lubrication control stations are as follows

1. Removed PLC, simplified system structure, improves the efficiency and reduces the cost of control core part.
2. Downwards the lubrication control's center of gravity to the intelligent lubrication control station UC-3N. Without control center, system stability and flexibility is greatly enhanced. Even if an individual control station has problem, it will not affect to the entire lubrication system.
3. Intelligent lubrication control system is no longer over-reliance on the bus communication, which significantly reducing traffic. Those control tasks originally completed by high-speed communication lines such as Ethernet or optic fiber now can be completed by simple communication lines. Under the premise of guaranteed performance, greatly reduce the cost of the system.
4. UC-3N itself is lubrication control station, can set various control parameters and display monitoring information at site, very convenient for commissioning. Under certain conditions, it can be separated from the lubrication system, operates as an independent lubrication point of its own.
5. Due to communication speed limitation, traditional intelligent lubrication system cannot perform high speed control. But UC-3N is intelligent control station and executes in-place control at the lubricating point; it can easily accomplish tasks that require high speed.