VENDOR-NEUTRAL NETWORKING USING FLAME CUTTING SYSTEMS AS AN EXAMPLE

Application for manufacturing industry -
Integration of new and legacy machines,
digital retrofit of flame cutting systems

SUMMARY

Information exchange between plasma cutting system and flame cutting machines is optimized and extended to the entire infrastructure of the Application Center, including to extraction systems, building management and gas supply. With a retrofit, legacy systems are also integrated.

CURRENT SITUATION

The state of the art is complex automation solutions for plasma cutting systems. Networking of different machine systems having similar tasks or upstream/downstream work content, with one another and with enterprise software, is not widespread at present.

PROJECT DESCRIPTION

In the project:

- Legacy machines and assets are retrofitted with network connections and IT (I4.0 retrofit) and integrated into a network of machines.
- Interactions between different assets and enterprise software are tested and new user benefits are identified and developed

REFERENCES

www.industry-business-network.org

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SOLUTION

The assets of different machine and plant manufacturers are combined in a single overarching network of machines. Approaches are developed and tested to visualize, for the network as a whole, the maintenance status, availability and gas & power consumption of all machines and to automatically initiate optimization or preventive measures. Also investigated is the extent to which relevant information can be read from legacy machines (not developed for Industry 4.0) by means of a retrofit and additional information can be generated for others by means of a model (software).

CONTACT

The networking of multi-vendor machine and plant systems from different vendors and of new digital systems and non-network-ready legacy systems is being developed and tested on the basis of DIN SPEC 91345 (RAMI 4.0). Visualization of machine status and consumption data for a higher-level machine system is being undertaken in sheet metal working.