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Part 2

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2. Organisation of production of sterilisation equipment at a small machine-building enterprise

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Introduction. Small and medium-sized enterprises producing equipment for the pharmaceutical industry and medicine are developing in Ukraine. One such enterprise is the Poltava Plant of Medical Equipment and Instruments, which specialises in manufacturing sterilisation and other equipment. However, the company's specialists have encountered an issue. The literature does not sufficiently describe the peculiarities of its work organisation.

Materials and Methods: This study is based on the experience of Poltava Plant of Medical Equipment and Instruments. The innovative component of production was studied on the example of equipment for sterilisation, drying and cooling of workwear.

Results and discussion. To implement innovative projects, a small or medium-sized enterprise must have a research and innovation department in addition to its main and auxiliary workshops. This is a crucial requirement for success. The Poltava Plant of Medical Equipment and Instruments research department has significantly improved the steam steriliser's design by using high-quality construction materials, increasing thermal insulation thickness, and installing a tubular condenser. These improvements have resulted in uniform temperature distribution throughout the sterilisation chamber, reduced heat loss, and an intensified drying process. As a result, sterilised workwear with a moisture content of no more than 1% can now be produced without the need for additional drying equipment.

Fig. 1. Innovative steam steriliser SP-GK 100

The proposed technological complex for the production of sterilisation equipment includes the following workshops and departments: 1 – cutting and production of blanks for sterilisation equipment, 2 – machining, turning and milling operations, bending and welding, 3 – assembly shop, 4 – research and innovation department.

Conclusion. The implemented measures have successfully enabled the creation of highly competitive sterilisation equipment. This equipment is currently being showcased at leading exhibitions in the pharmaceutical industry and medical engineering (https://cutt.ly/Zw8ZwjC5), and has been widely implemented in laboratories and pharmaceutical enterprises.