

## Preface

The international scientific conference VVaPOL is organized every two years. The scientific focus of the conference is divided into three areas: Research, production and use of steel ropes, Research, production and use of conveyors, Research, production and use of hoisting machines and vertical conveying. The international scientific conference VVaPOL has been held since 1974, in 2018, it was already its XX<sup>th</sup> volume.

The conference was held at a traditional venue in Grand hotel PERMON High Tatras – Podbanské (Slovakia) on 18th - 21st September 2018. A primary objective of VVaPOL 2018 Conference was to present the highest quality results in the field of research, production and use of steel ropes, conveyors and hoisting machines.

Following topics were discussed at the conference:

- research, development and production of steel ropes,
- materials and properties of wires for steel ropes production,
- lubricants, lubrication and anticorrosive protection of steel ropes,
- theoretical and practical questions of steel ropes construction,
- mechanical stress of steel ropes in operation,
- lifetime, quality and assessment of steel ropes,
- the use and safety of steel ropes by operation of cranes, elevators and cableways,
- monitoring, maintenance, control and test of steel ropes,
- research, development and production of new construction of conveyors,
- theory of transport by conveyors,
- design, modelling, simulation of conveyors,
- practical application of conveyors and their constructive elements,
- additive and auxiliary devices of conveyors,
- measurement, sensors, monitoring and diagnostic systems of conveyors,
- management systems for conveyors,
- quality control for conveyors,
- management of transport safety by conveyors,
- research and development in the field of hoisting machines,
- hoisting machines and their constructive elements,
- mechanics of hoisting machines,
- equipment of hoisting machines,
- transport boxes of hoisting machines,
- the use and operation of hoisting machines,
- practical skills from hoisting machines operation,
- modernization of older hoisting machines,
- the problem of mining from the depth 1,000 m and more,
- calculation of basic parameters for vertical conveying.

Selection of articles published in VVaPOL 2018 conference proceedings includes many of the interesting facts and answers. The authors and their research teams have been analysing and solving the problems of steel ropes, conveyors and hoisting machines for many years. The members of Organizing Committee are convinced that the materials offer an interesting overview of the progress of their work and will provide inspiration for new scientific challenges.

Vieroslav Molnár (editor)