

Krystyna Schabowska

Metodyka obliczeń przekładni zębatach w świetle dzieł Stanisława Solskiego (1622-1701)

**The methods of calculating toothed gears in the light of the works
of Stanisław Solski (1622-1701)**

SUMMARY

One of the most precious works in the history of Polish technical writing is *Architekt polski* [The Polish architect] by Stanisław Solski (1622-1701). The book is generally regarded as a manual of mechanics and hydrotechnics, but the fragment of the book which is subject to discussion in the present paper makes a major contribution to the history of the development of another technical discipline, namely the fundamentals of machine construction. The relevant chapters deal with the methods of selecting toothed wheels and gears. Solski provided the basis for calculating the dimensions of the wheels such as the diameter, radius or nominal pitch, as well as the number of teeth. He also discussed the methods of selecting the mating wheel. In providing the theoretical basis for the division of the circle into the required number of sections, which is essential in making a toothed wheel, Solski referred the readers to his earlier work *Geometra polski* [The Polish geometrician]. Writing his book in the 17th century, Solski was aware of his potential readers' insufficient ability to perform some mathematical operations. He therefore also devised a table that enabled the readers to select the driving and driven wheels in a quick and easy way.

Analecta – Studia i Materiały z Dziejów Nauki
[Analecta – Studies and Materials on the History of Science]
XII, 2003, 1-2, 235-251