ANALYSIS OF MOTOR SPEED EFFECT ON WINDING TENSION IN THE WIND UP CALENDERING PROCESS

By

Sugiyarto
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SWISS GERMAN UNIVERSITY
The Prominence Tower
Jalan Jalur Sutera Barat No. 15, Alam Sutera
Tangerang, Banten 15143 - Indonesia

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

Sugiyarto

Student Date

Approved by:

Dr. Widi Setiawan

Thesis Advisor Date

Edi Sofyan, B.Eng., Ph.D

Thesis Co-Advisor Date

Dr. Maulahikmah Galinium, S.Kom., M.Sc.

Dean Date

ABSTRACT

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Sugiyarto
Dr. Widi Setiawan, Advisor
Edi Sofyan, B.Eng.,Ph.D, Co-Advisor

SWISS GERMAN UNIVERSITY

The winding process is widely used in manufacturing industries. For the high speed winding, the center winding method is used. Irregular internal stresses at the center of the roll result in major weaknesses such as buckling, spoking and cinching. Therefore, entanglement with the right tension is very important to get a stable wound package.

It should be mentioned that winders usually operate based on the principle of precision winding. A typical characteristic of winders is increasing the surface speed as the diameter increases. This will cause the winding to increase which has the potential to cause damage.

To overcome damage due to an increase in roll tension, the rolling motor speed must decrease so that the roll tension remains the same or even decreases. And because the rolling process uses additional media in the form of a liner fabric which is tension controlled with pneumatic disc brake, the pressure brake must also be made taper.

Keywords: Winding, Diameter, Tension, Speed

DEDICATION

I dedicate this works for my parents, my Family

And for my Faculty I loved, Faculty of Engineering & Information Technology in Swiss German University

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