

“Haggie Hints”



by George Delorme
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Haggie North America Inc. - Meeting your hoisting needs!

GEORGE DELORME

Ph: 514-453-1283; Fax: 514-453-0631; Email: georgedelorme@sympatico.ca
Toll Free: 1-888-HAGGIE-9 (424-4439) Press #1

ANDREW AXIUK

Ph: 514-931-0974; Fax: 514-425-5300 Email: haggieandrew@bell.net
Toll Free: 1-888-HAGGIE-9 (424-4439) Press #2

PATRICK SMITH

Ph: 705-621-0761; Fax: 705-621-0834 Email: haggie.PatSmith@outlook.com
Toll Free: 1-888-HAGGIE-9 (424-4439) Press #3

Rope Attachments - reducing stress at the conveyance end

DISCUSSION:

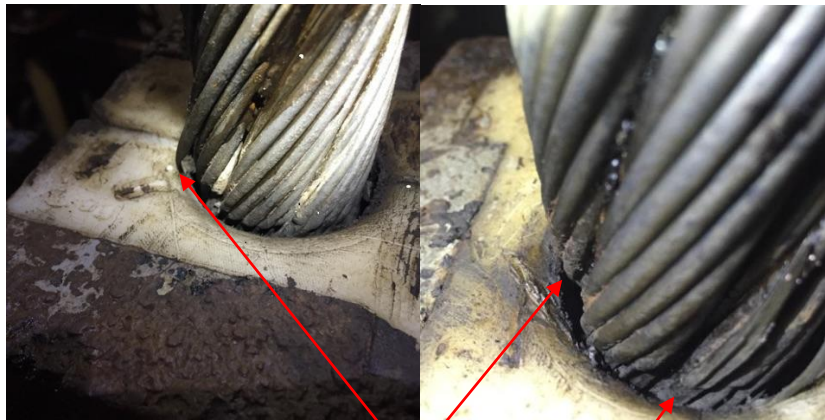
While it is common practice to use 90° articulating Chase Blocks when ropes are connected to conveyances on Friction Winder installations, it is not always the norm with Drum Winders.

However, the stresses at the rope entry point at the attachment and on the connecting points to the conveyance drawbars can also be significant with this system.

Normal vibration that is present in a rope during a hoisting cycle will be arrested at the connection points to the conveyance. The main areas of concern are:-

- At the point at which the rope enters the rope attachment.
- At the conveyance drawbar and all associated connecting points.

The following two photos show typical examples of wear and broken wires that can occur at the rope entry point into a Thimble Cappel.



Note broken wires and wear

RECOMMENDATION:

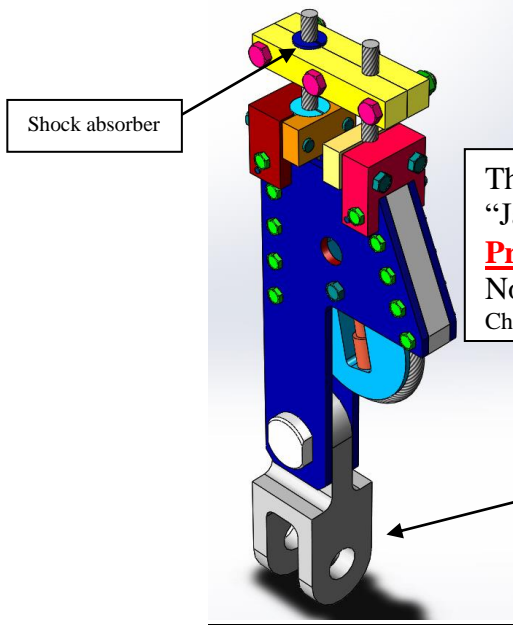
In order to minimize the stresses at these locations, we recommend the use of a 90° articulating chaseblock. This chaseblock offers flexibility in both directions thus assisting in reducing these stresses in the rope. An added benefit is an extra degree of freedom (plane of movement) when the conveyance is installed. If by chance there are restrictions related to the rope attachment orientation, then two such chaseblocks can be used to align it in the proper direction.

Also note that some manufacturers of thimble cappel have polyurethane rubber shock absorber bushings which also assists in absorbing/reducing vibrations at the rope entry point.

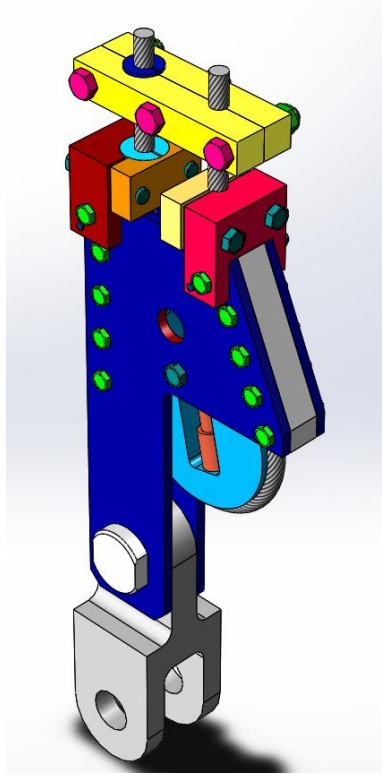
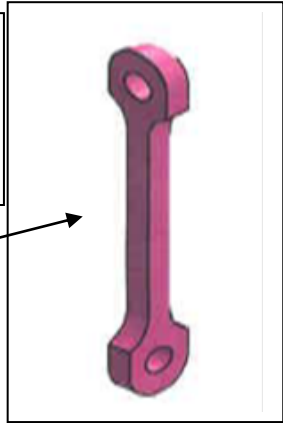
Whenever a cappel is installed, it is important to check that the area where the rope enters the cappel is "radiused" and smooth to avoid rope damage.

While this recommendation may not be regulated, we believe it is the "best practice".

The sketch below shows a few possible scenarios for articulation options depending on the conveyance drawbar.



Thimble Cappel with a 90° articulating
“Jaw & Tang” Chaseblock
Preferred arrangement
Note – a 90° articulating “Tang & Tang”
Chaseblock is also available to suit conveyance.



Thimble Cappel with a straight
“Jaw and Tang” Chaseblock
Not the preferred arrangement