July 2014

Correspondence to Darle Dudley

Maurice Knott

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Mechanical Technology, Inc.
968 Albany-Shaker Road
Latham
NEW YORK

Attention: Mr. Darle W. Dudley

Dear Mr. Dudley:

Stelco Bevel Gears

We would like to release our bevel gear drawings as soon after the December 29th meeting as possible. With this in mind we are enclosing a print of our first bevel gear drawing. Copies of this drawing, this letter, and our layouts R-819 and R-825 are also being sent to Mr. Fallon to pass along to the Gleason engineer coming on the 29th.

The points of discussion we have thought of are:

a) Drawings and Data Sheets
   Our present intention is to have two gear drawings for each pair of bevels, one for each hand of spiral. We have prints of the Gleason's data sheets which will accompany these drawings for one of the hands of spiral. We need a second set for the opposite hand of spiral and opposite direction of rotation.

We did mention before the possibility of Gleason bringing a model drawing for industrial gears of this class. We are still interested.

b) Tooth Accuracy
   The spiral bevel gears will be made to AGMA quality 12. I am not sure of your intention on the additional specifications on page 7 of your report. A reduced profile tolerance is called for on the helicals. Then the spacing
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Tolerance is reduced to .0004". Does this apply to the bevels?

Does a pitch tolerance of + .0002" satisfy the .0004" spacing tolerance?

c) Tooth Contact

Does the light lead tooth contact requirement of page 10 go on the detail drawing?

d) V & H

We expect that Gleason will take back, from the meeting, whatever Morgan layouts are needed to make recommendations for V and H values. We will send out our drawings without actual values and add them later.

e) Backlash

We want to discuss the effect of temperature on the backlash. We are working on this.

f) In Position Measurement of Mounting Distance

We are interested in the manner of gauging that Gleason would use to check the mounting distances at assembly.

h) Shimming

How much shimming should be provided for?

i) Fastenings

We are using Allen shoulder screws as shown on R-819 to attach the bevel gears to the line shafts. We are interested in whether the experience that led Gleason to pin the bolt heads to the shaft flange also led to better methods of handling the many other bolts on the unit. The gear type couplings use lockwashers. On stationary internal bolts we are talking about wiring the heads together.

See you on the 29th.

Sincerely,

MORGAN CONSTRUCTION COMPANY

by

Maurice Knott, Research Engineer

Minimum Listing

Enclosures: Copy of letter to Mr. Fallon

Print of preliminary bevel gear drawing

" " R-819
" " R-825