IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

AMERICAN AXLE & MANUFACTURING, INC.,	:	
Plaintiff,	:	
v.	:	C.A. No. 15-1168-LPS
NEAPCO HOLDINGS LLC and NEAPCO DRIVELINES LLC,	:	
Defendants.	:	

ORDER

At Wilmington, this **7th** day of **April, 2017**:

For the reasons set forth in the Memorandum Opinion issued this date,

IT IS HEREBY ORDERED that the disputed claim terms of U.S. Patent Nos. 7,774,911; 8,176,613; and 8,528,180 are construed as follows:

Claim Term	**Court's Construction**
tuning at least one liner to attenuate as least two types of vibration transmitted through the shaft member [claim 1 of the '911 patent]	controlling characteristics of at least one liner to configure the liner to match a relevant frequency or frequencies to reduce at least two types of vibration transmitted through the shaft member
providing a liner tuned to attenuate a plurality of types of vibration transmitted through the shaft member [claim 17 of the '613 patent]	providing a liner having characteristics configured to match a relevant frequency or frequencies to reduce a plurality of types of vibration transmitted through the shaft member

tuning a mass and stiffness of at least one liner [claims 22 and 36 of the '911 patent]	controlling a mass and stiffness of at least one liner to configure the liner to match a relevant frequency or frequencies
liner having a mass and a stiffness that are tuned to the driveline system [claim 13 of the '180 patent]	liner having a mass and a stiffness configured to match a relevant frequency or frequencies of the driveline system
tuned resistive absorber for attenuating shell mode vibrations [claims 22 and 36 of the '911 patent; claim 13 of the '180 patent]	a liner having characteristics configured to match a relevant frequency or frequencies to deform as vibration energy is transmitted through the liner to absorb the vibration energy to dampen shell mode vibrations
tuned reactive absorber for attenuating bending mode vibrations [claim 22 of the '911 patent]	a liner having characteristics configured to match a relevant frequency or frequencies to oscillate in opposition to vibration energy to cancel out a portion of the vibration energy to dampen bending mode vibrations
tuned reactive absorber for attenuating at least one of bending mode vibrations and torsion mode vibrations [claim 36 of the '911 patent; claim 13 of the '180 patent]	a liner having characteristics configured to match a relevant frequency or frequencies to oscillate in opposition to vibration energy to cancel out a portion of the vibration energy to dampen at least one of bending mode vibrations or torsion mode vibrations

positioning the at least one liner within the shaft member such that the at least one liner is configured to damp shell mode vibrations in the shaft member by an amount that is greater than or equal to about 2% / positioning the liner within the shaft member to damp shell mode vibration by an amount that is greater than or equal to about 2% [claim 1 of the '911 patent; claim 17 of the '613 patent]	Indefinite
tuned to within about ± 20% [15%, 10%, 5%] of a bending mode natural frequency of the shaft assembly as installed in the driveline system / tuned to within about ± 20% [15%, 10%, 5%] of the natural frequency of the driveline system in at least one of the bending mode and the torsion mode [claims 1-4 of the '911 patent; claims 17-20 of the '613 patent]	Indefinite

HON. LEONARD P. STARK
UNITED STATES DISTRICT JUDGE