

600-2023 Appendix B-R1 (231109)
Non-Circular Design Curves

Instructions to Bidder

The selection of CIPP minimum thicknesses for non-circular liners for Bidding Purposes shall be completed in accordance with the appropriate design curves provided in Appendix B. The design curves provide thickness requirements based on a range of long-term flexural strength and modulus values for the conditions noted in the design tables.

Bidders shall determine minimum liner thicknesses based on the maximum thickness obtained from:

- S-MA20015402, the greater of:
 - Appendix B 1-1
 - Appendix B 1-2
- S-MA20015397
 - Appendix B 2-1
 - Appendix B 2-2
- S-MA20015403
 - Appendix B 3-1
 - Appendix B 3-2
- S-MA20015405
 - Appendix B 4-1
 - Appendix B 4-2
- S-MA20015374
 - Appendix B 5-1
 - Appendix B 5-2

Thicknesses for Bidding shall also be increased as required to facilitate processes based on the Contractor's intended means, method, and techniques.

Methodology:

Design Methodology: ASCE MOP 145

Non-Reinforced CIPP:

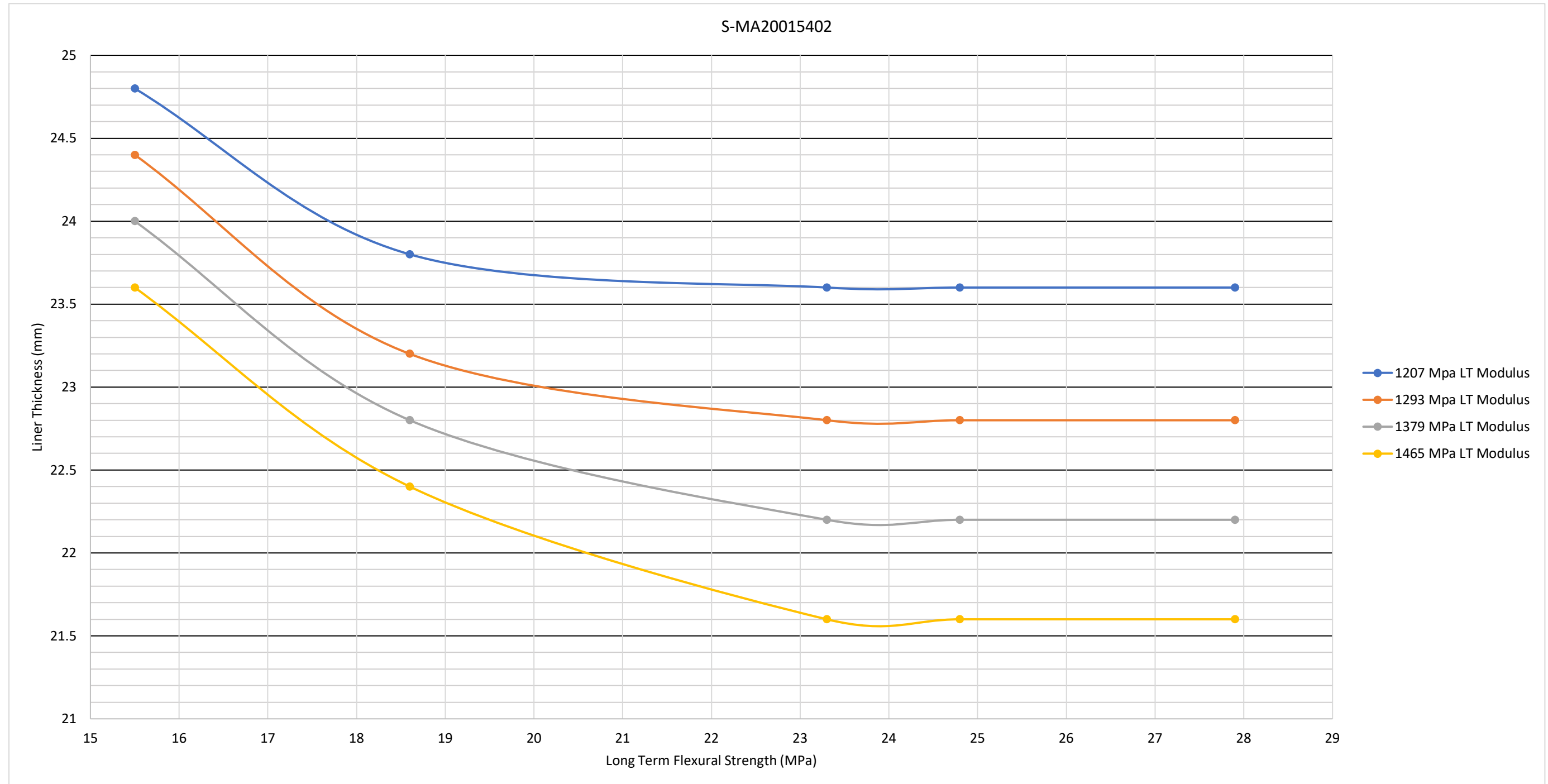
- Applicable Long Term (LT) Flexural Strength
 - 15.5 MPa to 27.9 MPa
- Applicable Long Term (LT) Flexural Modulus
 - 1207 MPa to 1465 MPa

Soil Density: 18.85 kN/m³

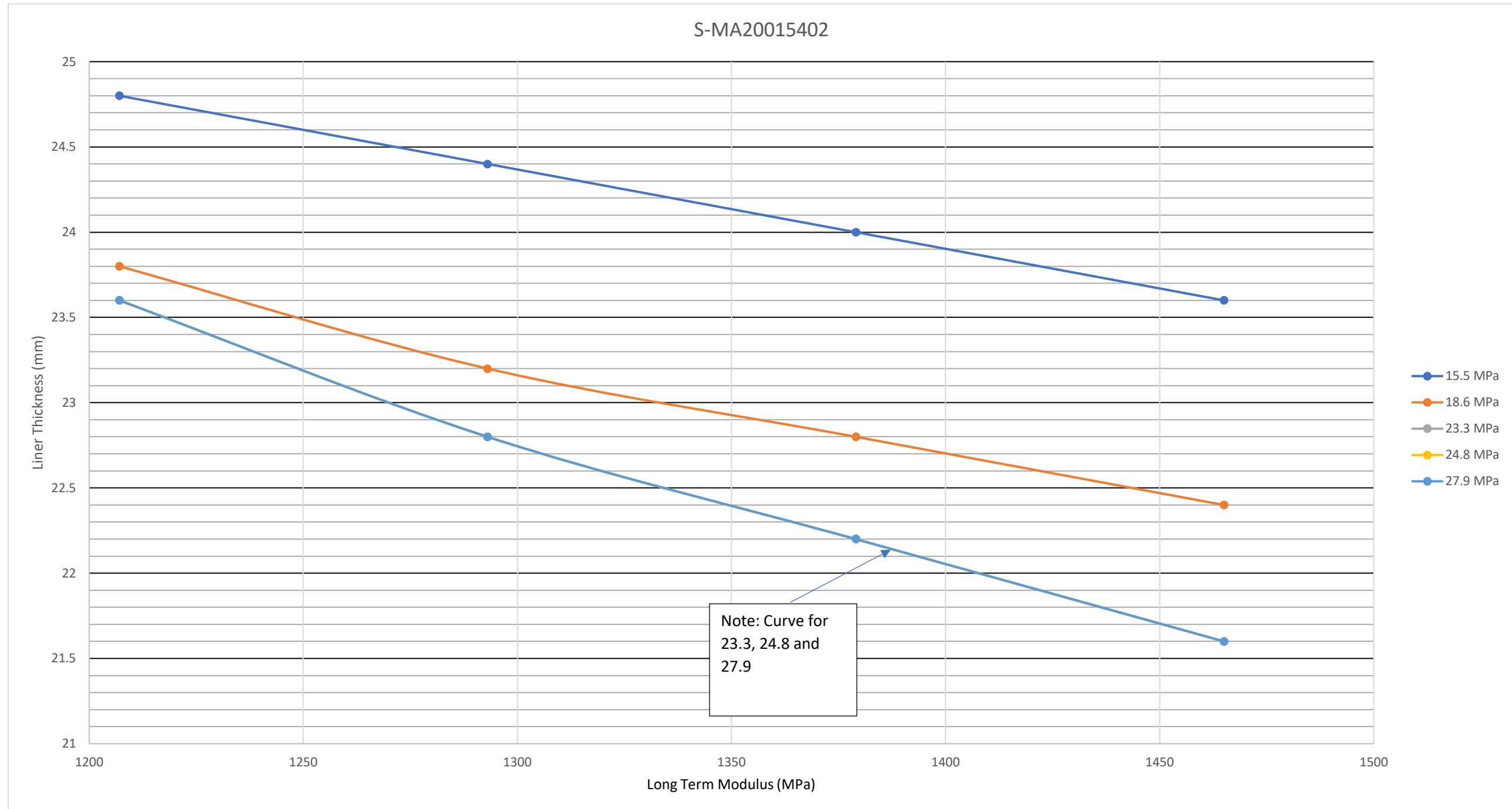
Modulus of Soil Reaction: 6.890 MPa

Assumed Ground Water Table: 2.0 m below ground surface

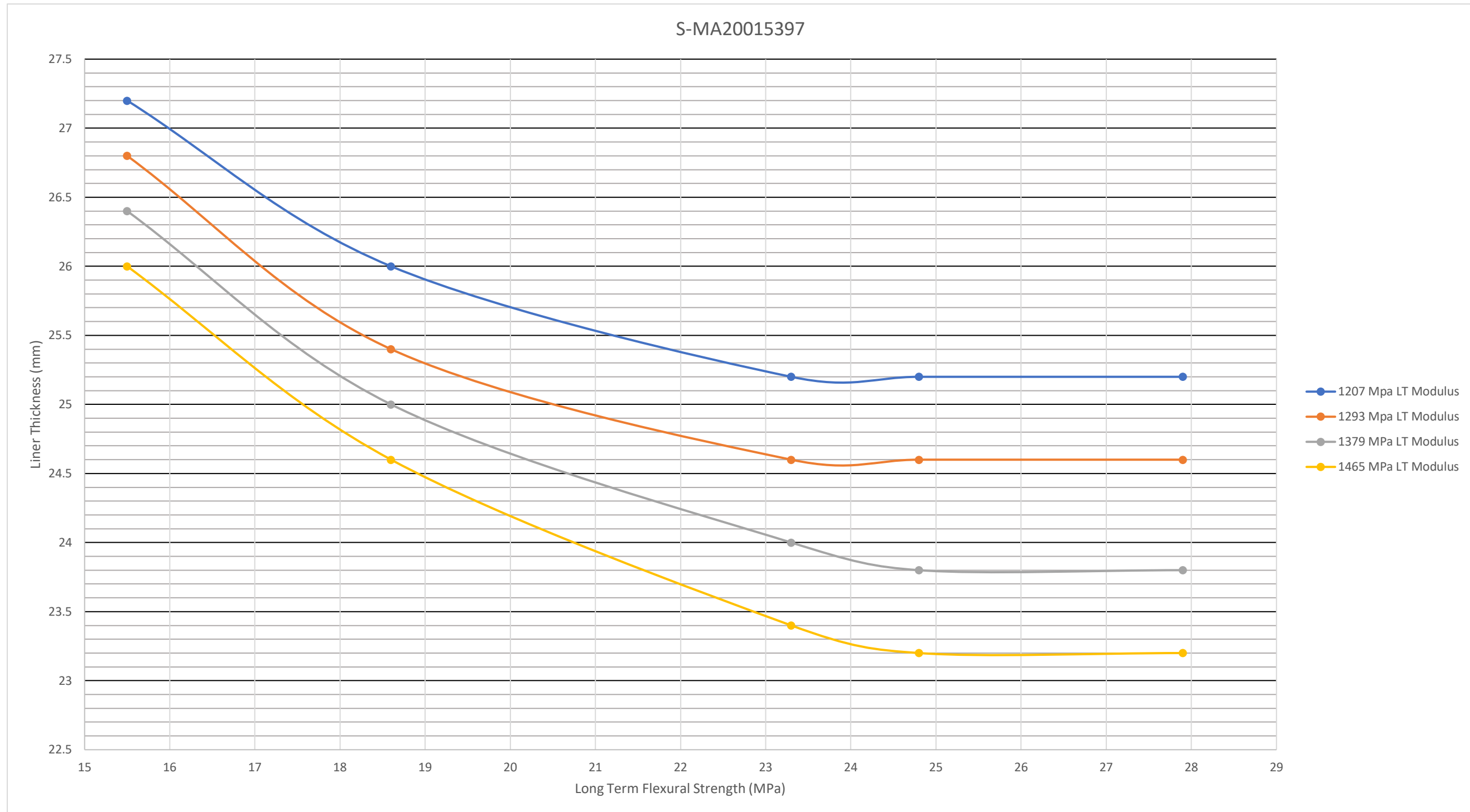
S-MA20015402 – Select applicable curve based on LT Modulus and determine thickness based on LT Flexural Strength



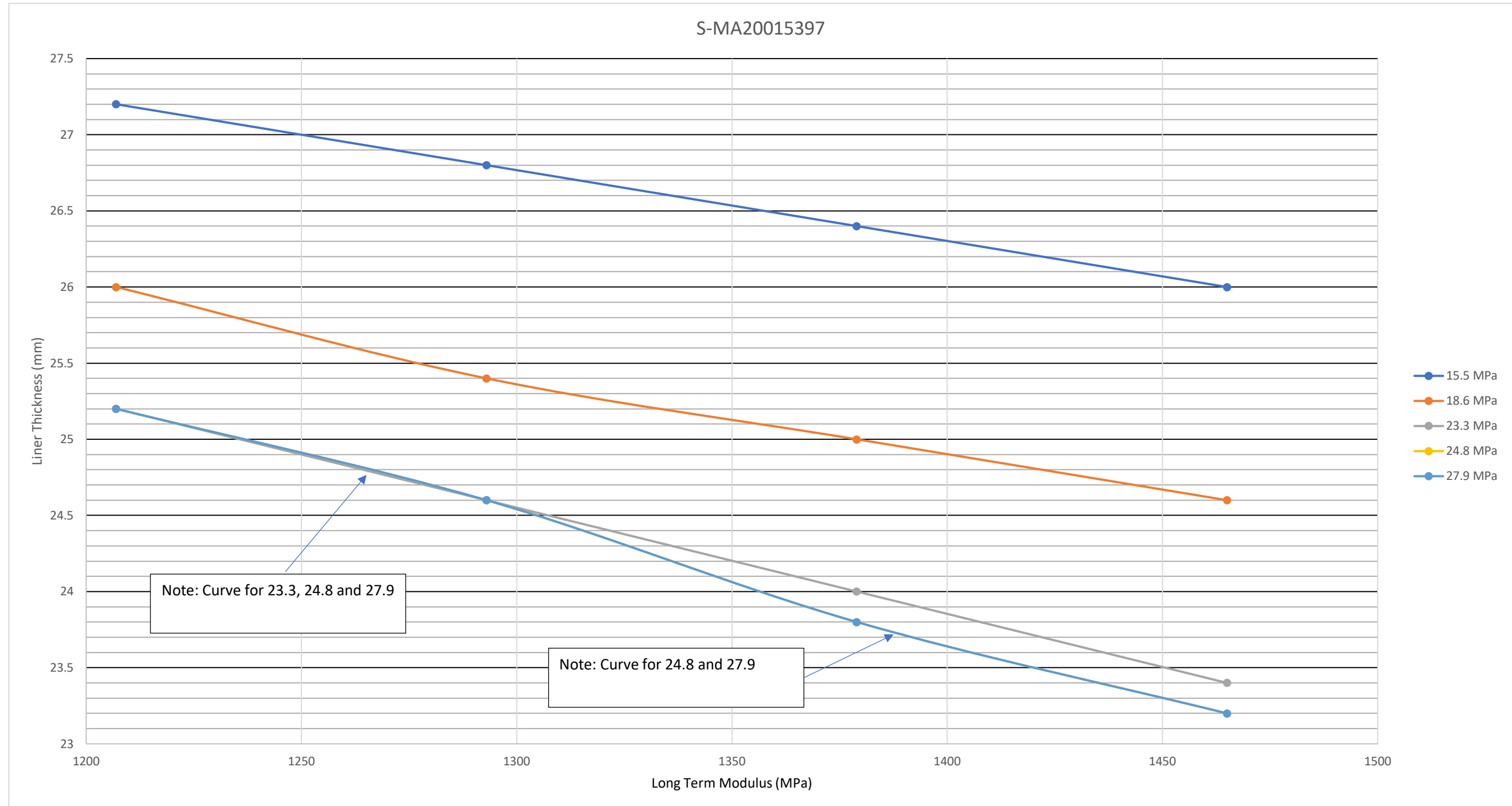
S-MA20015402 – Select applicable curve based on LT Strength and determine thickness based on LT Modulus



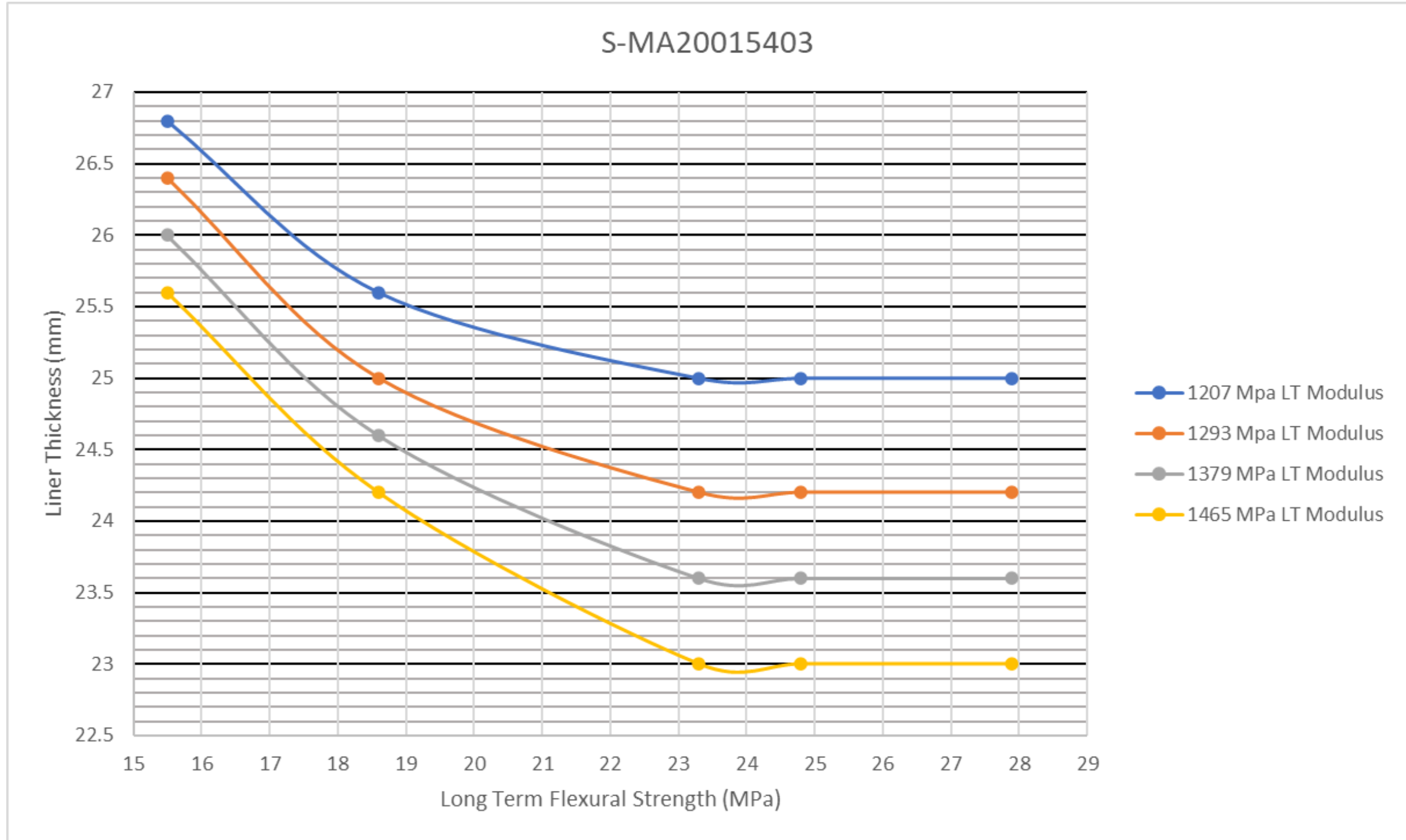
S-MA20015397 – Select applicable curve based on LT Modulus and determine thickness based on LT Flexural Strength



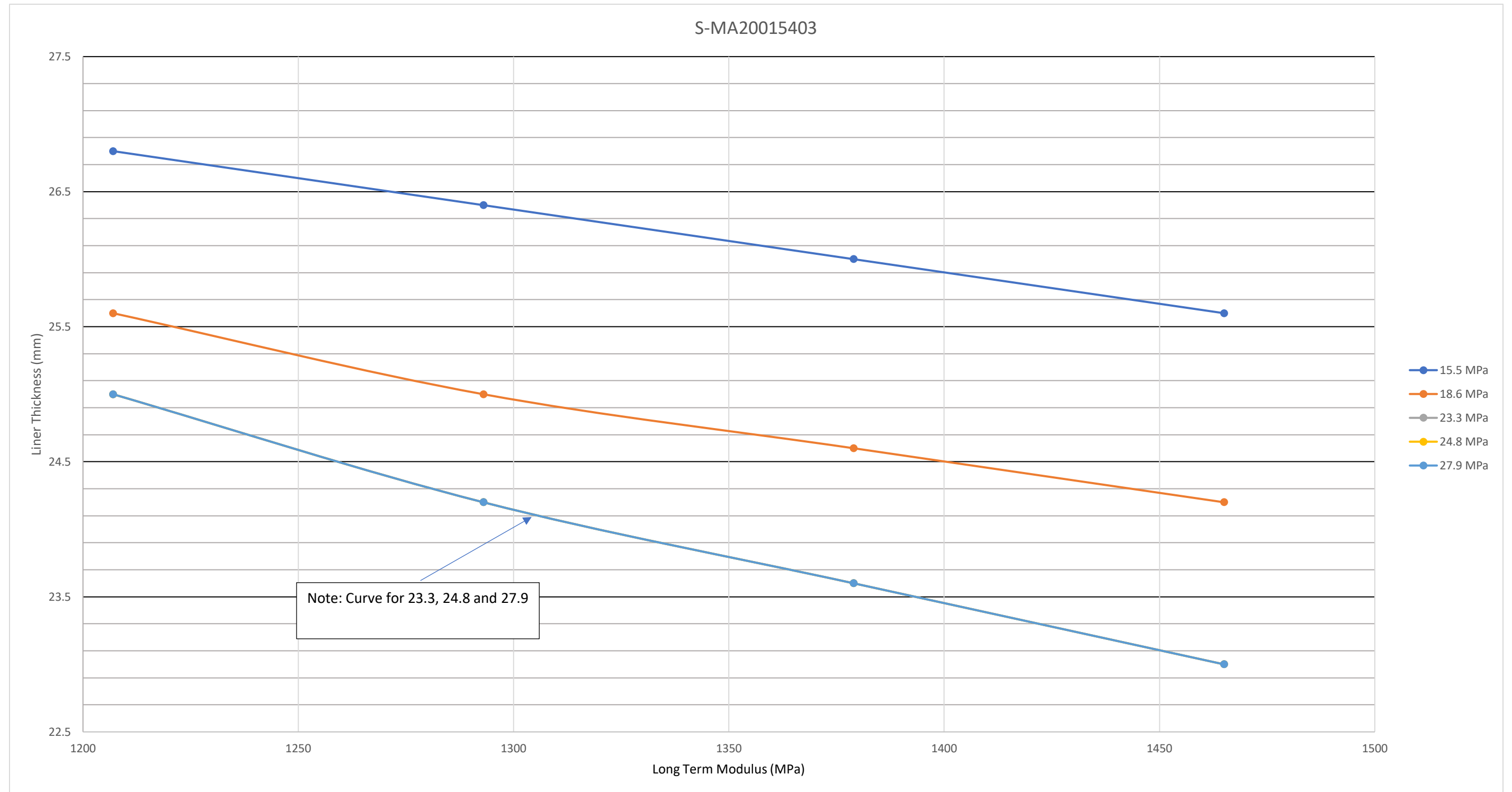
S-MA20015397 – Select applicable curve based on LT Strength and determine thickness based on LT Modulus



S-MA20015403 – Select applicable curve based on LT Modulus and determine thickness based on LT Flexural Strength

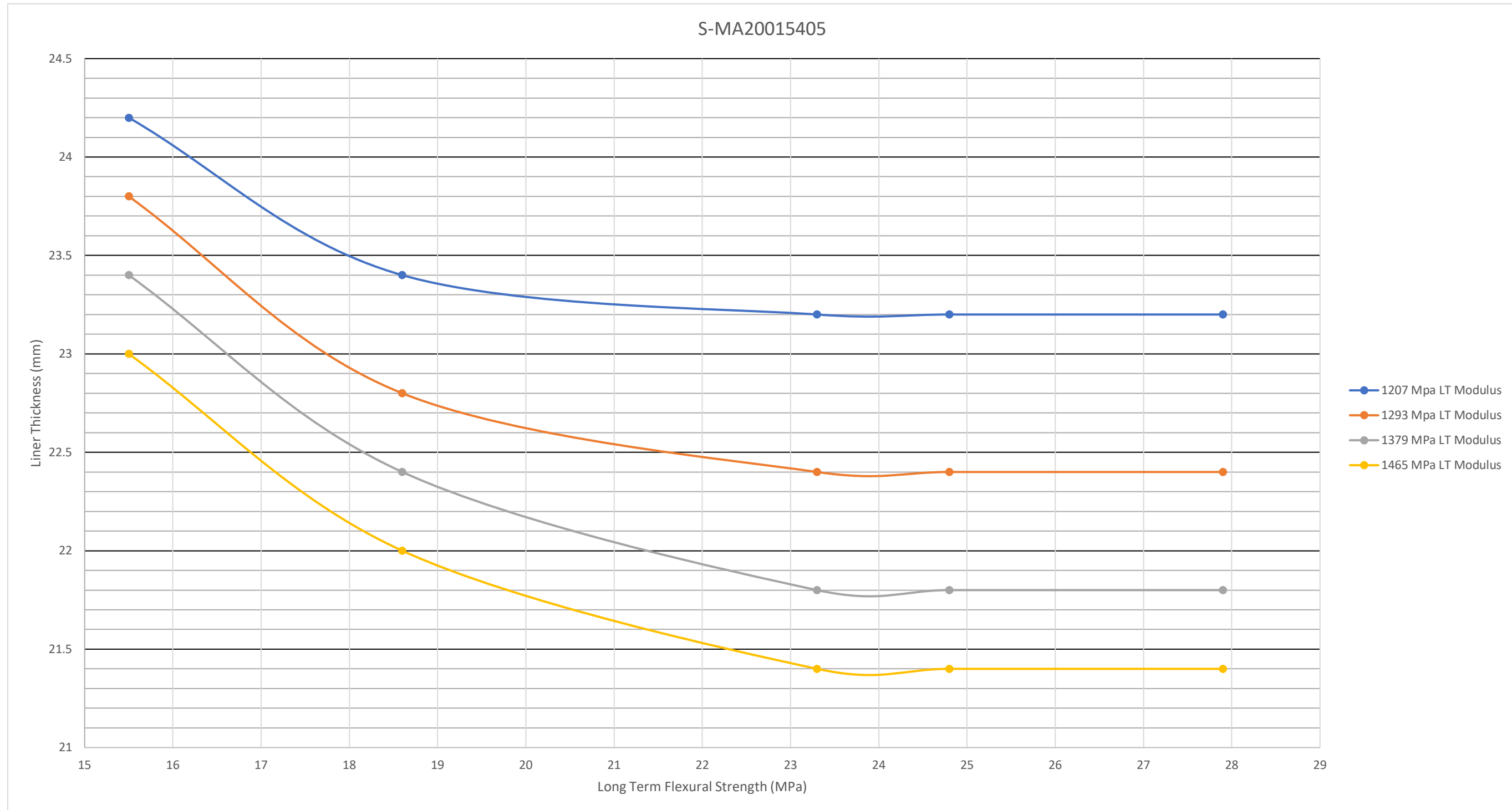


S-MA20015403 – Select applicable curve based on LT Strength and determine thickness based on LT Modulus

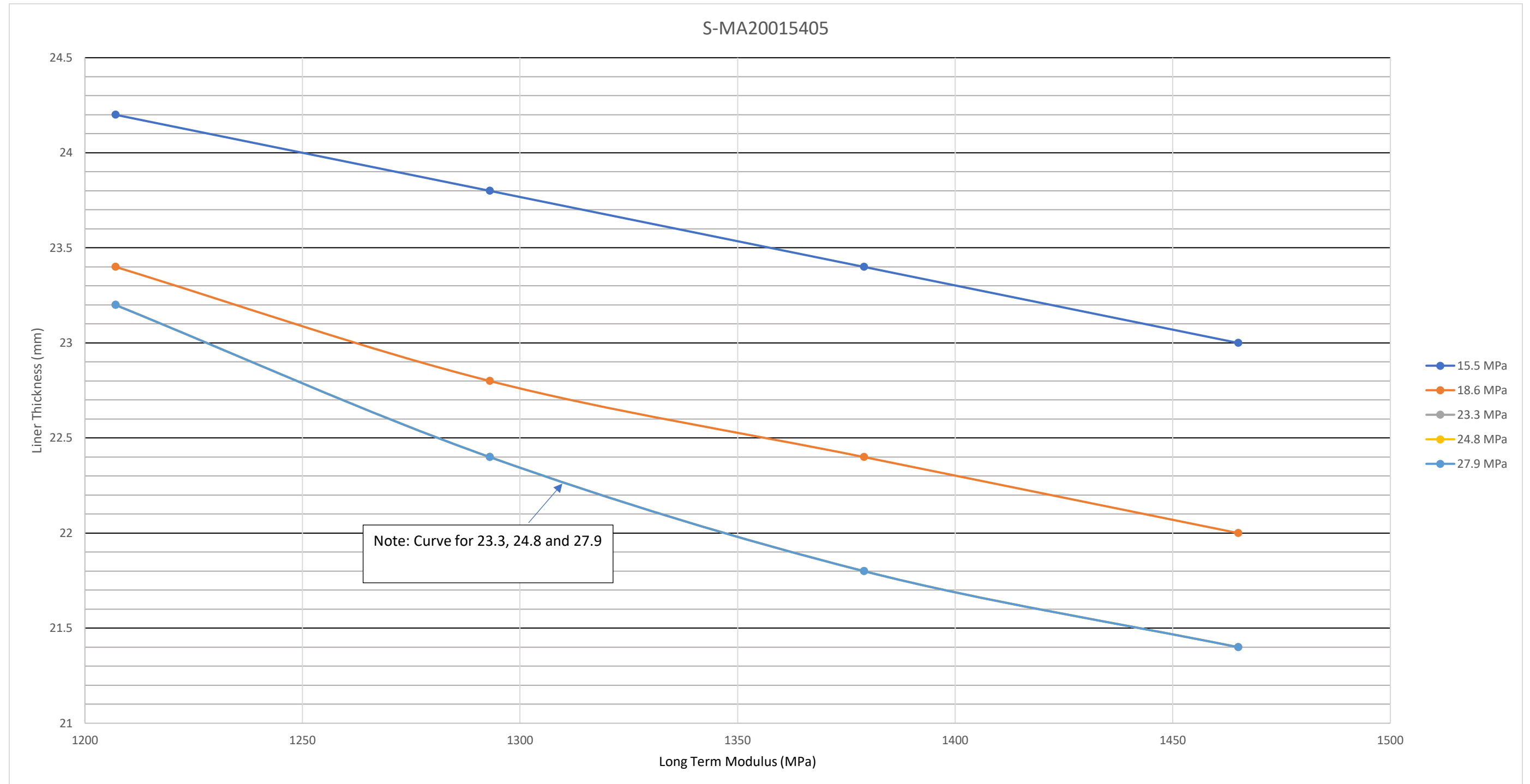


Appendix B 4-1

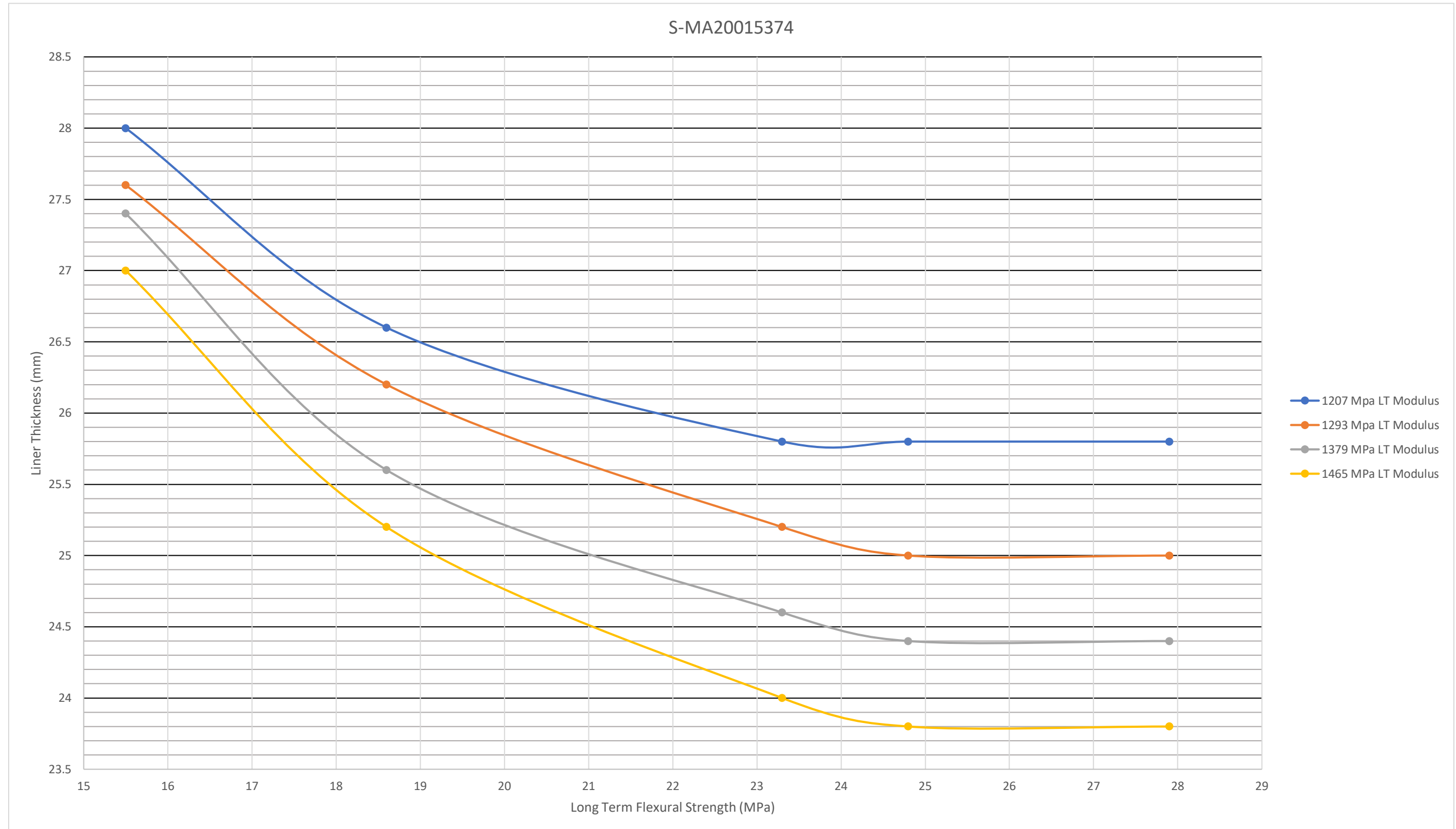
S-MA20015405 – Select applicable curve based on LT Modulus and determine thickness based on LT Flexural Strength



S-MA20015405 – Select applicable curve based on LT Strength and determine thickness based on LT Modulus



S-MA20015374 – Select applicable curve based on LT Modulus and determine thickness based on LT Flexural Strength



S-MA20015374 – Select applicable curve based on LT Strength and determine thickness based on LT Modulus

