Hydro Québec
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REPORT

Performance test on spacer dampers for a quad bundle of ACSR Bersimis

J-7777 / LMT-2013-09-09-056

June 11th to July 13th, 2015

Customer : ASBESCO (India) private Limited.

Mechanical and Environmental Testing Laboratory
1806, boul. Lionel-Boulet, Varennes (Québec) Canada J3X 1S1

CONCLUSION

The following results were obtained with Asbesco spacer-dampers installed as per their recommendations on a quad bundle of ACSR Bersimis conductors with a nominal tensile load of 39 kN:

	Results	Requirements
Max. peak-to-peak bending amplitude at clamps	32 µm	< 359 µm
Max. RMS bending amplitude at clamps	5.8 µm	< 72 µm
Max. P-P displacement for subspan oscillations	126 mm	< 350 mm
Max. fY_{rms} for subspan oscillations in each subspan	26 mm/s	< 80 mm/s
Mean fY_{rms} value associated with a given wind sector	1.4 mm/s	< 70 mm/s

Every spacer damper was inspected at the end of the test and no displacement of the clamps along the conductor was noticed nor any loosening of components or damage to conductor or spacer damper components.

Consequently, the quad bundle spacer damper for conductor ACSR Bersimis, Asbesco drawing number ASD/Q-45/35-39/D and as per their recommended spacer damper distribution chart meets the entire requirement related to this test as per specification of Power Grid Corporation of India Ltd.

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SUMMARY

CUSTOMER'S NAME AND ADDRESS	Asbesco (India) private Limited, 4, Ho-Chi-Minh Sarani, Kolkata, 700 071, India Phone: +91 33 26531275 Fax: +91 33 26532895
CUSTOMER'S REPRESENTATIVE	Mr. Christian Bernauer, General Manager Engg. & QC
EQUIPMENT TESTED	Spacer damper for a bundle of four ACSR Bersimis conductor, Asbesco drawing No ASD/Q-45/35-39/D
SPECIFICATION	As per specification of Power Grid Corporation of India Ltd. (see Appendix A)
CONDUCTOR	ACSR Bersimis conductor
TENSILE LOAD IN EACH SUB-CONDUCTOR	Nominal tension: 39 kN
SAFE BENDING AMPLITUDE [EPRI, 2009]	Y_b = 239 μm peak-to-peak
BUNDLE CONFIGURATION SPACING	457 mm quad bundle
LOCATION OF TESTS	Hydro-Québec – IREQ Mechanical and Environmental Testing Laboratory Ligne Expérimentale de Varennes (LEV) 2100, chemin du Lac, Varennes, Québec, Canada, J3X 1P7
DATE OF TESTS	June 11th to July 13th, 2015
TEST PERSONNAL	Test engineers: Josée Paradis, Jr Eng., M.Eng. Pierre Van Dyke, Eng. M.A.Sc. Ph.D. Test technician: Martine Gouin Test mechanic: Pierre Forest