

Report

**Performance test on spacer dampers
for a bundle of six ACSR Lapwing**

J-7506 / LMT 2013-03-07-015

June 27th to July 25th, 2014

Customer: ASBESCO (India) PVT. Ltd.

Laboratoire mécanique et thermomécanique

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 bundle of six Lapwing conductors with a nominal tensile load of 54 kN:

	Results	Requirements
Max. peak-to-peak bending amplitude at clamps	101 μm	< 330 μm
Max. RMS bending amplitude at clamps	20 μm	< 66 μm
Max. P-P displacement for subspan oscillations	18 mm	< 350 mm
Max. fY_{rms} for subspan oscillations in each subspan	3.7 mm/s	< 80 mm/s
Mean fY_{rms} value associated with a given wind sector	1.9 mm/s	< 70 mm/s

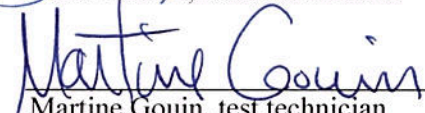
Every spacer damper was inspected at the end of the test and there was neither displacement of the clamps along the conductor nor any loosening of components or damage to conductor or spacer damper components.

Consequently, the hex bundle spacer damper for conductor ACSR Lapwing, Asbesco drawing number ASD/H-004 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.

Report prepared by



Josée Paradis, research scientist

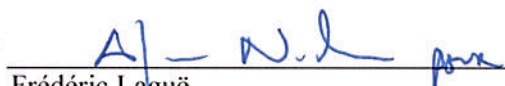


Martine Gouin, test technician



Pierre Van Dyke, senior research scientist

Approved by



Frédéric Laguë
Manager – Laboratoires d'essais mécaniques et
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SUMMARY

CUSTOMER'S NAME AND ADDRESS	ASBESCO (INDIA) PVT LTD. 1-A, K.B.R. Complex, 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 six Lapwing ACSR conductor Asbesco drawing No ASD/H-004
SPECIFICATION	As per specification of Power Grid Corporation of India Ltd. (see Appendix A)
CONDUCTOR	ACSR Lapwing
TENSILE LOAD IN EACH SUB-CONDUCTOR	Nominal tension: 54 kN
SAFE BENDING AMPLITUDE [EPRI, 2009]	$Y_b = 220 \mu\text{m}$ peak-to-peak
BUNDLE CONFIGURATION SPACING	457 mm hex bundle
LOCATION OF TESTS	Hydro-Québec – IREQ Laboratoire Mécanique et thermomécanique Ligne Expérimentale de Varennes (LEV) 2100, chemin du Lac, Varennes, Québec, Canada, J3X 1P7
DATE OF TESTS	June 27 th to July 25 th , 2014
TEST PERSONNEL	Test engineers: Pierre Van Dyke, Eng. M.A.Sc. Ph.D. Josée Paradis, Jr Eng., M.Eng. Test technician: Martine Gouin Test mechanic: Pierre Forest