

**BLUESCOPE STEEL LIMITED SURELINE® POLE PRODUCT GROUP
STRUCTURAL ADEQUACY CERTIFICATE**

O'Donnell Griffin have made an independent review of the structural engineering aspects of the processes and outputs carried out by BlueScope Steel Limited for the development of the range of SURELINE® poles intended for overhead electrical distribution lines.

The products reviewed to date are:

1. ϕ 273mm x 4.7mm wall thickness Grade 450MPa SURELINE® pole – O/A pole length of 12.4m with a 10.2m lever arm
2. ϕ 273mm x 5.8mm wall thickness Grade 450MPa SURELINE® pole – O/A pole length of 14.0m with a 11.7m lever arm
3. ϕ 323.9mm x 4.8mm wall thickness Grade 450MPa SURELINE® pole – O/A pole length of 12.58m with a 10.2m lever arm
4. ϕ 323.9mm x 5.4mm wall thickness Grade 450MPa SURELINE® pole – O/A pole length of 14.05m with a 11.6m lever arm
5. ϕ 457mm x 7.11mm wall thickness Grade 450MPa SURELINE® pole – O/A pole length of 18m with a 15.6m lever arm with a mid pole splice
6. ϕ 457mm x 8.59mm wall thickness Grade 450MPa SURELINE® pole – O/A pole length of 21.9m with a 19.3m lever arm with a mid pole splice
7. ϕ 457mm x 9.8mm wall thickness Grade 450MPa SURELINE® pole – O/A pole length of 25m with a 22.2m lever arm with a mid pole splice
8. ϕ 457mm x 9.8mm wall thickness for the bottom section and ϕ 457mm x 7.11mm wall thickness for the top section. Both sections had a grade of Grade 450MPa SURELINE® pole – O/A pole length of 21.4m with a 18.8m lever arm with a mid pole splice

REVIEW PROCESS

O'Donnell Griffin have made an independent review of the BlueScope Steel Limited process and output by undertaking the following work:

- a. Inspection of destructive testing apparatus
- b. Witness destructive testing
- c. Independent calculation of pole capacity
- d. Calculation of potential pole loads in service

REVIEW OUTCOME

O'Donnell Griffin conclude that BlueScope Steel Limited have conducted a design and development process suitable for the engineering of an electricity distribution pole.

O'Donnell Griffin conclude that where the SURELINE® pole is installed in accordance with the technical limits developed by BlueScope Steel Limited, in an environment considered to be suitable for a steel structure, the pole will perform in accordance with generally accepted industry practice for an electricity distribution pole.

O'Donnell Griffin concluded that all pole testing was completed in accordance with the requirements of AS4676 : 2000 and that the pole capacity determined using AS4600 was verified.

LIMITATION

O'Donnell Griffin does not endorse or warranty the SURELINE[®] product beyond the assessment of the development process.

O'Donnell Griffin have no commercial interest or benefit from the relationship with BlueScope Steel Limited or the product SURELINE[®] poles other than accepting a fee for service to carry out the review of the development process.

O'Donnell Griffin make no recommendation on the use of the SURELINE[®] pole.

O'Donnell Griffin have not made any assessment or recommendation regarding the foundation which is suitable for the pole.

O'Donnell Griffin have not reviewed the pole for use other than for an electricity distribution pole.

O'Donnell Griffin have not made any assessment or recommendation regarding the mid-pole two section pole connection developed by BlueScope Steel Limited for taller poles.



Frank Salandra
TRANSMISSION DESIGN ENGINEER

23th September 2005
Revision 1.2
Status: Final