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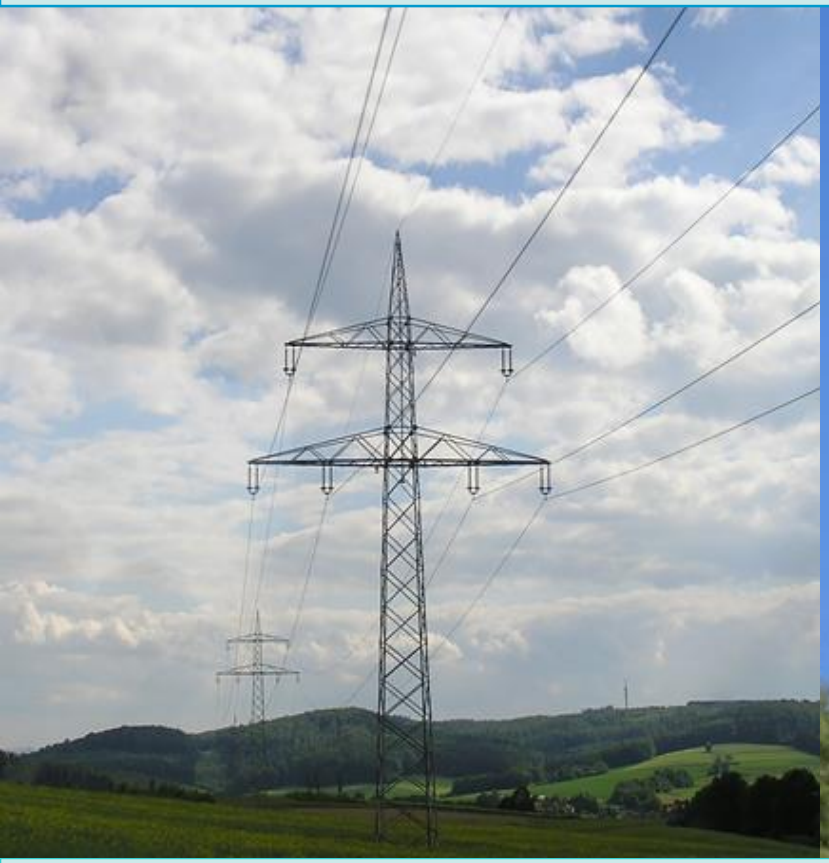

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Innovative solutions for design and strengthening of telecommunications and transmission lattice towers using large angles from high strength steel and hybrid techniques of angles with FRP strips

Webinar/Workshop

08 | 12 | 2020

Innovative developments in the field of steel lattice towers
News from research and practice

Free of charge registration

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PROGRAMME

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Steel lattice towers are extensively built in Europe and worldwide to serve telecommunication or power transmission purposes. Such towers are often installed in mountainous terrain with very limited access to heavy vehicles. Their members are frequently composed of equal leg angle sections that are preferred to tubular sections due to their easier connection that results in a simpler erection. Angles sizes range from light to heavy sections with leg lengths up to 300 mm that are lately produced in Europe and are employed for towers with increased height. The use of high strength steel in lattice towers results in smaller member cross sections and further structural weight reduction.

The workshop informs on the latest research results in the field of steel lattice towers followed by presentations on current technical innovations in steel towers based on results from steel applied research.

The workshop comprises a critical view on the current design standards for steel lattice towers, the presentation of new and economic design rules for single angle and built-up members, the strengthening of members of lattice towers by introducing carbon fiber reinforced polymers (CFRP) strips and a performance-based approach for estimating the reliability of steel lattice towers. In addition to the presentations, design recommendations for steel lattice towers and for the application of the CFRP strips will be given.

The event is targeted at experts from research and practice. It includes building authorities, design offices, suppliers of electric energy, telecommunication providers, steel producers, steel fabricators, and representatives from researchers and development as well as federations.

The event is organized in the framework of the EU-research project ANGELHY and it is financially supported by the research Fund for Coal & Steel (RFCS).

Ideal support from FOSTA Forschungsvereinigung Stahlanwendung e. V.

10:00	**Welcome** Prof. I. Vayas, NTUA, Athens; M. Tibolt, AMBD, Luxembourg
10:10	**EU-Research project ANGELHY** Prof. I. Vayas, NTUA, Athens
10:30	**Case study design – Transmission tower** M. Tibolt, AMBD, Luxembourg
10:50	**New rules for single and built-up angle members** M.Z. Bezos, Université de Liège, Liège; A. Beyer, CTICM, Saint-Aubin
11:20	**Hybrid angle members - CFRP materials – Design rules** S. Reygner, Sika France, Le Bourget; K. Vlachakis, NTUA, Athens
11:35	**Risk assessment of lattice towers** Prof. D. Vamvatsikos, NTUA, Athens; D. Bilionis, NTUA, Athens
11:50	**Design tool for steel lattice towers** M. Friehe, RWTH Aachen, Aachen
12:10	**Wind loads on steel lattice towers** Prof. F. Kemper, RWTH Aachen, Aachen
12:30	**Discussion and Closure of Workshop at 13:00**