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RTS specializes in providing weld inspections, mappings, and condition assessment services to the tower & pole industries



Welding Defects – Overlap

In past issues we have been highlighting common weld defects that result in a failing CWI report. In this issue we'll be discussing the welding defect overlap.

What is Overlap?

Overlap is the protrusion of unfused weld metal beyond the weld toe or weld root. Overlap is a surface discontinuity that forms a mechanical notch and is almost always considered rejectable. Quite often inspectors use the marking 'OL' to designate this condition.

Why Does Overlap Occur?

Two common causes of this defect may be insufficient travel speed for the given electrical parameters and improper preparation of the base material.

What Does the Code Say?

AWS D1.1 Structural Welding Code – Steel (2015), Table 6.1, Visual Inspection Acceptance Criteria, is the weld inspector's reference tool for visual inspection activities. Table 6.1, Part 4, addresses weld profiles. The Table refers the weld inspector to Section 5.23 of the Code which states that all welds shall meet the visual acceptance criteria of Table 6.1 and shall be free from cracks, overlaps, and unacceptable profile discontinuities. There is no allowable overlap in a final weld provided by the Code. □



City image by Saketh Reddy

Federal Agency Fights to Keep Up in Drone Innovations

The Department of Transportation issued a notice earlier this year proposing rulemaking that would allow drone operators to fly at night over humans without obtaining a waiver. If enacted, the regulations would translate to new work for U.S.-based drone companies. Along with the proposals, the Federal Aviation Administration announced three drone traffic management test sites.

The proposed rulemaking follows similar ratified drone regulations in Canada, said Michael Cohen, CEO of Industrial Skyworks, the first such company to obtain a waiver to fly at night in the U.S. "I think there's a chance these proposals will be enacted," he says. "The Canadian rules were progressive. I think the language in the DOT's announcement means they're trying to stay ahead of Canada."

Flying at night without waivers—means that Cohen and other drone surveyors could perform thermal imaging surveys on buildings that were previously outside their range of authority. "Up to today, any major urban center with an airport was not our business," he said. Nighttime waivers aren't currently available in those areas. But if the proposal becomes regulation, Cohen can market his company's service in urban areas.

The proposal for such flights would work in conjunction with nighttime flight for many companies. Previously, even with a waiver to fly at night near airports, a company didn't have permission to fly over people and would be precluded from flying over many locations.

The new regulations would go hand in hand with the FAA's Low Altitude Authorization and Notification Capability, which is an automated process that lets drone operators enter their location into an FAA app and receive quick approval or denial to fly in that airspace.

'The old system was a burdensome online app,' said Cohen. "If the new proposed rule-

making goes through then the whole world opens up in terms of commercial operations."

Also important to the integration of drones into public airspace are the Unmanned Traffic Management Pilot Projects, or UTM's. The goal of the UTM is to create an automated communications system between drones that allows them to avoid one another.

According to the DOT announcement three organizations were selected to participate in the UTM development initiative: Nevada's UAS Test Site Smart Silver State, North Dakota's Northern Plains Unmanned Aircraft Systems Test Site, and Virginia Tech's Mid-Atlantic Aviation Partnership.

The projects will run simultaneously until September, stated the announcement. "All three winning test sites will work on the same goals, but each site had the ability to propose different additional add-on goals and objectives when they won the RFP," said Chris Theisen, director of research and development at the Northern Planes site.

Nevada is specializing in surveillance and flying unmanned vehicles in urban areas beyond visual line-of-sight (BVLOS) for deliveries. North Dakota is specializing in controlled and uncontrolled airspaces and on the outskirts of cities. Virginia Tech is focusing in Communications, BVLOS, operating over people, and deliveries.

UTM technology was developed by NASA, said Theisen, and the test sites are working to improve it. If the pilot programs are successful, it could mean future drones and manned vessels will share airspace and avoid one another in an automated manner, he said. "That means urban drone operations are getting to a point of personal transportation. So, you're talking about flying cars." □

Based on an article originally posted by NATE.



NATE Members Participate in 5G Event at White House with President Trump and FCC Chairman Pai

President Trump Delivers Remarks on 5G Technology; Chairman Pai Talks Future Spectrum Auctions and Rural Broadband

A delegation of NATE leaders, consisting of personnel ranging from tower technicians, foremen, company owners and Association executives, participated in a 5G technology themed event April 12 at the White House in Washington, D.C. The NATE members were invited to participate by President Donald Trump, FCC Chairman Ajit Pai and key officials at the White House.

At the event, President Trump delivered remarks on the importance of the United States winning the global race to 5G. During his speech, the President also stressed the Administration's support and commitment to next generation technologies and expanding rural broadband connectivity to all corners of the country in order to continue keeping the American economy strong and vibrant.

FCC Chairman Ajit Pai utilized the occasion of the event to provide an update on the agency's 5G FAST plan and make two major FCC announcements that will positively impact both 5G technology and rural broadband deployments. First, Chairman Pai announced that the FCC plans to start the process to move towards conducting the largest spectrum incentive auction in American history later this year. The auction will include new millimeter (MM wave) frequency spectrum bands that are vital for the industry to access for future 5G deployment. Second, Chairman Pai announced that the FCC is moving forward to develop a \$20 billion Rural Digital Opportunity Fund with the goal of closing the digital divide by bringing broadband connectivity to rural areas of the country.



At the event, a delegation of NATE representatives were strategically positioned by President Trump during his remarks wearing their harnesses, hardhats and other safety gear. This platform provided outstanding recognition to the role that tower technicians play to enable a connected, prosperous economy.

The NATE delegation invited to participate at today's White House event included the following individuals:

- NATE Chairman Jimmy Miller
MillerCo, Inc.
- Carlos Church
MillerCo, Inc.
- John Dougherty
MillSenna Contracting, Inc.
- Jordyn Ladner
MillerCo, Inc.
- Kenneth Massengale
Teltronic Towers, Inc.
- Jack Ray
Above All Tower Climbing, LLC
- Jeff Tinio
Teltronic Towers, Inc.

NATE Executive Director Todd Schlekeway was also on hand to accompany the Association's delegation at the event.

"I would like to thank President Trump and the White House staff for the opportunity to participate in today's event," said Carlos Church, Lead Tower Technician at MillerCo, Inc. in Gulfport, Mississippi. "It was an honor to stand by the President during his address and listen to his speech on 5G. This is an experience I will never forget," added Church.

"NATE applauds President Trump, FCC Chairman Pai and other top Administration officials for their leadership and commitment in advancing policies to ensure that the United States positions itself to win the competitive race to 5G," stated Chairman Jimmy Miller. "The President's remarks hit close to home as NATE member companies have deployed every generation of wireless networks and are currently on the front lines densifying networks as part of this crucial 5G deployment phase. NATE members also share the President's goal of expanding broadband and related network infrastructure to rural and underserved areas and in fact our companies are doing this work on a daily basis right now," Miller said.

"It was very encouraging to witness President Trump and Chairman Pai utilize the platform of today's festivities to pay homage to the workforce by sharing the stage with them," said Executive Director Todd Schlekeway. "A safe and skilled tower technician workforce are the most precious assets available to the industry and expanding this pipeline of workers will be key to maintain America's premier position in wireless. It is great to know that NATE and President Trump share common synergies and mutual goals related to workforce development and the Association is committed to working alongside the Administration to develop additional training pathways and programs necessary to expand the industry's labor force pool," Schlekeway added.

For more information on the event, visit www.whitehouse.gov and www.fcc.gov. □

Article courtesy of NATE

Where 5G Is Today

By Don Bishop
Special to Reese's Pieces

You wouldn't believe the controversy going on behind the scenes for commercial wireless communications — specifically, the fifth generation of cellular technology, or 5G. 1G was analog. 2G was digital. 3G was digital with web capability and text messaging. The current 4G technology has more capacity that makes uploading and viewing video better. 5G is intended to make the video experience even better. Also, its quicker electronic response time (known as low latency) will make remote-controlled surgery and autonomous (driverless) vehicles practical, for two examples.



Advertising by AT&T, which promotes 5G Evolution, makes it sound as though 5G is here, and AT&T offers it. But 5G is not here, which is why Sprint is suing AT&T, claiming false advertising. "AT&T is deliberately deceiving consumers into believing that their existing 4G LTE network operates on a coveted and highly

anticipated 5G network," a Sprint spokesperson told Digital Trends, an online publication. "The reality is that this network isn't 'new' and '5G E' is a false and misleading term."

Wireless carriers, including AT&T, have conducted trials of 5G technology that use radio frequencies so high that their use for mobile communications hardly was contemplated not so long ago. To add capacity to carry more communications traffic and more video, 5G technology will add the use of millimeter-wave frequencies to the current radio-frequency spectrum that carriers use. Called millimeter-wave because of their short wavelengths, the new frequencies pose great challenges for sustaining connectivity, especially for mobile use.

How's this for a glimpse into the 5G future: In an AT&T blog, Thaddeus Arroyo, the CEO of AT&T Business, described a possible retail use for 5G. "What if a clothing company could provide a digital kiosk at a location near you? It could help you determine the correct size, walk you through their inventory and place your order. It's a digital transaction but also an

in-person shopping experience — the best of virtual and physical for a new way to shop.

"Imagine a future where you walk past a storefront with Internet of Things cameras. They sense you, virtually clothe you in their latest fashions, and render you and your new wardrobe on high definition screens in the store window. I don't know about you, but this would certainly catch my eye and drive me into that store," Arroyo said.

I am uncertain whether such a display would drive me into the store or scare me away, to tell you the truth.

5G today is partly exaggerated promotion or overreaching claims, partly the trial use of millimeter-wave frequencies and the antenna technology that must come with them and partly the development of new wireless devices for consumer and business use.

Next issue: More on today's 5G and what the future holds. □

Don Bishop is the executive editor and associate publisher of AGL Magazine.





Band of Brothers: NATE Releases First Video of 2019

NATE has released its first Climber Conversation video of 2019, and it features the relationships that develop between tower crews. The video debuted at the International Wireless Communications

Expo (IWCE) in April at the Las Vegas Convention Center.

The video, "Band of Brothers" includes testimonials from tower technicians as they discuss the bond that occurs when working at elevation

and traveling with fellow workers.

Dedicated to worker safety, NATE advocates technicians and industry experts to participate in this unique program by sharing the video to their social networking platforms using

the hashtag Climber Conversation.

To view the video click the YouTube icon above.



Article based on original post by NATE

Reese's MINIATURES IN TOWER TREK THE SEARCH FOR FLAWS



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SAFE. NEW. METHODS.



TO SEEK OUT DEFECTS AND
WELD DEFICIENCIES...



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HAS GONE, BEFORE.



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