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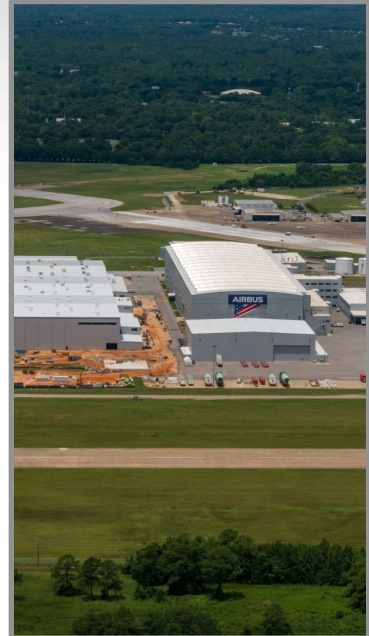
The UPM Market Informer

Airbus Begins U.S. Production of A220

Airbus has officially begun manufacturing the A220 in the U.S. The first team of A220 production workers began work at Airbus’ Mobile, Alabama-based production facility following their recent return from on-the-job training in Mirabel, Quebec, Canada, where the A220 program and primary final assembly line are located.

“The expansion of our commercial aircraft production in Mobile to a second product line – with 400 additional jobs to support it – further solidifies Airbus’ standing as a truly global aircraft manufacturer and confirms without a doubt that Airbus is an important part of America’s manufacturing landscape,” said Airbus Americas Chairman & CEO C. Jeffrey Knittel. “With Mobile, and our production network in Asia, Canada and Europe, we have strategically created a worldwide industrial base to better serve our customers.”

Airbus announced plans for the addition of A220 manufacturing in Mobile in October 2017. Construction on the main A220 flowline hangar and other support buildings for the new A220 began at the Mobile Aeroplex at Brookley at the beginning of this year. Airbus is producing the first few aircraft within some current A320 Family buildings and newly-built support hangars. The first U.S.-made A220 – an A220-300 destined for Delta Air Lines – is scheduled for delivery in the third quarter of 2020. By the middle of the next decade, the facility will produce between 40 and 50 A220 aircraft per year. *Source: Airbus*



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Embry-Riddle, Pratt & Whitney, AAR Partner for Veteran Aviation Career Program

Embry-Riddle Aeronautical University has partnered with Pratt and Whitney and AAR to help veterans enter the commercial aviation workforce. According to an Embry-Riddle press release, the partnership offers the Aviation Maintenance SkillBridge course, an intensive nine-week program that puts transitioning servicemen and veterans into aviation maintenance training. The course, which aims to help veterans transition into civilian life, was launched on Aug. 5 at the Embry-Riddle Worldwide campus at the Marine Corps Air Station New River, near Camp LeJeune in Jacksonville, North Carolina. In addition, the program will expose veterans to aerospace industry partners for potential career opportunities. Participants from the program's initial group will receive invitations for interviews with Pratt and Whitney or AAR.



"This inaugural cohort of SkillBridge participants is the first of many planned at locations throughout the country," said John Watret, worldwide chancellor at Embry-Riddle. The flight school plans to expand the program under an agreement with the Department of Defense. "We look forward to establishing a secure path for former service members to career success in a booming industry," he added.

Chris Curtin, Pratt & Whitney executive director of talent, inclusion & engagement, said his company has a long history of hiring veterans and their family members. "The SkillBridge program gives us another great opportunity to continue hiring talented service members into our organization," Curtin said.

Brian Sartain, AAR senior vice president of repair and engineering services, also explained his company's eagerness to hire the SkillBridge participants. "The unparalleled experience and knowledge base veterans gain in the military lay a strong foundation in pursuing aviation certification," said Sartain. "Veterans are equipped with the technical skills and focus we look for in candidates, and that is why AAR is a top military-friendly employer. AAR will be looking to hire the veterans who graduate from the SkillBridge Program."

UPM to Exhibit at Fall Tradeshow

September brings the onset of key industry tradeshow, and United Performance Metals will exhibit at two upcoming programs.

Join us at the **International Fastener Expo** in Las Vegas, Nevada September 17-19. UPM will be located in **Booth #1359** at the Mandalay Bay Resort and Casino. Over 5000 attendees from over 30 countries will visit the fastener show to network and find new products and suppliers. The global market for industrial fasteners is forecast to reach \$99 billion by 2024. United Performance Metals considers this market to be one of our most valuable industries. We're looking forward to meeting peers and making new industry partners at the show.

UPM will also be exhibiting at the **International Titanium Association** in Mobile, Alabama September 22-24. This 35th anniversary of ITA will provide insights into the worldwide titanium industry and serves as a networking opportunity unlike no other. UPM will exhibit in **Booth #419** at the SMG Mobile Convention Center.

INTERNATIONAL
FASTENER EXPO



DOE Inject \$40M Into Hydrogen Projects

The US Department of Energy (DOE) has announced approximately \$40m in funding will be invested into 29 H2@Scale hydrogen projects in the 2019 financial year. The focus of the projects is to enable affordable and reliable large-scale hydrogen generation, transport, storage, and utilization in the US across multiple sectors.

Funded through the DOE's Office of Energy Efficiency and Renewable Energy (EERE), with contribution from DOE's Office of Nuclear Energy, the selected projects will advance hydrogen storage and infrastructure technologies and identify innovative concepts for hydrogen production and utilization including grid resiliency.

"The H2@Scale concept is a critical piece of the country's comprehensive energy strategy and an enabler of multiple industries in our economy," said US Secretary of Energy Rick Perry. "As an energy carrier, hydrogen has the potential to unite our nation's domestic energy resources. These selections support DOE's mission and advances our commitment to enable economic growth and energy security through the development of more affordable hydrogen technologies."

These projects will address one of the main challenges in the sector; to invest in technologies to produce, deliver, store, and utilize hydrogen affordably enough to become mainstream. The US produces over 10 million tons of hydrogen, nearly one-seventh of the global supply, primarily for oil refining and fertilizer production. Hydrogen infrastructure includes over 1600 miles of hydrogen pipeline, a growing network of stations, and thousands of tons of storage in underground caverns.

Increasing the production, transport, storage, and utilization of hydrogen from the current baseline can represent an opportunity across various sectors in the economy. For example, producing hydrogen when generation exceeds load on the grid can reduce curtailment of renewables and optimize existing baseload assets, such as nuclear. The hydrogen can be stored, distributed, and/or used as a fuel for transportation, stationary power, process or building heat, and industrial and manufacturing sectors (such as steel manufacturing), creating an additional revenue stream and increased economic value. *Source: Pamela Largue, Power Engineering*

TechnipFMC in 'Significant' PowerNap Project Award

Oilfield services provider TechnipFMC will be supplying subsea equipment for Shell's PowerNap subsea tie-back development in the U.S. Gulf of Mexico. Shell made the final investment decision for the project earlier in August. TechnipFMC said on Thursday the contract was a "significant" one, meaning the value is between \$75 million and \$250 million.

Under the contract, TechnipFMC will design, manufacture and install subsea hardware, including subsea tree systems, subsea distribution controls, topside controls, flying leads and connectors for three wells, in addition to the supply of 20 miles of production umbilical and flowlines.

PowerNap is a subsea tie-back project to the Olympus production hub and is located in Mississippi Canyon, Block MC943 in the Gulf of Mexico. The project is expected to complete installation in late 2021 and produce up to 35,000 barrels per day of oil equivalent at peak rates.

Announcing the FID earlier this month, Shell said that the PowerNap – discovered in 2014 – was anticipated to have a forward-looking break-even price of less than \$35 per barrel and was estimated to contain more than 85 million barrels of oil equivalent recoverable resources. *Source: Oil Industry News*



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Surcharge Totals June, 2019 - November 2019

	June	July	Aug	Sept	Oct	Nov
15-5	0.4846	0.4359	0.4521	0.4978	*	*
15-7	0.7310	0.6835	0.7056	0.7899	*	*
17-4	0.4804	0.4296	0.4432	0.4828	*	*
17-7	0.5658	0.5136	0.5483	0.6380	*	*
201	0.4716	0.4242	0.4434	0.4998	*	*
301 7.0%	0.5606	0.5079	0.5416	0.6290	*	*
302/304/304L	0.6110	0.5554	0.5945	0.6933	*	*
304-8.5%	0.6315	0.5755	0.6172	0.7218	*	*
305	0.7796	0.7195	0.7799	0.9245	*	*
309	0.8125	0.7462	0.8067	0.9510	*	*
310	1.1184	1.0416	1.1396	1.3639	*	*
316/316L	0.8932	0.8389	0.8798	1.0040	*	*
316LS/316LVM	1.1700	1.1700	1.2700	*	*	*
317L	1.0626	1.0032	1.0453	1.1818	*	*
321	0.6423	0.5878	0.6321	0.7424	*	*
347	0.9520	0.8976	0.9419	1.0522	*	*
409/409 Mod	0.2146	0.1798	0.1759	0.1836	*	*
410/410S	0.2218	0.1856	0.1818	0.1895	*	*
430	0.2641	0.2199	0.2163	0.2236	*	*
434	0.3463	0.3018	0.2949	0.3030	*	*
439	0.2732	0.2273	0.2237	0.2309	*	*
440A	0.2641	0.2199	0.2163	0.2236	*	*
2205	0.8699	0.8091	0.8206	0.8909	*	*
263	5.6357	5.1224	5.2572	5.2387	4.9046	4.8125
276	5.3238	5.5766	5.4513	5.2053	5.1636	5.5403
A286	1.4141	1.4935	1.4536	1.3368	1.2892	1.4758
330	1.7351	1.8334	1.7842	1.6226	1.5670	1.8453
400	3.1557	3.3232	3.2392	2.8939	2.8496	3.3721
455	0.6500	0.6400	0.7100	*	*	*
465	0.8100	0.8000	0.8700	*	*	*
600	3.3514	3.5278	3.4326	3.1096	3.0577	3.6423
601	2.9156	3.0716	2.9927	2.7267	2.6601	3.1387
617	5.2837	5.1310	5.1436	4.9959	4.7931	4.9728
625	5.5572	5.7679	5.6646	5.4098	5.3503	5.7753
718	5.3343	5.4896	5.4121	5.1871	5.1290	5.5170
X-750	3.9198	4.0928	4.0001	3.6859	3.6326	4.2008
825	2.3732	2.5047	2.4417	2.2649	2.2047	2.4954
HX	3.4023	3.5678	3.4849	3.2866	3.2225	3.5368
188	7.3400	6.7700	6.0800	*	*	*
CCM	9.7400	7.8300	5.4200	*	*	*
L-605	8.4700	7.7300	6.7300	*	*	*

*Surcharge currently not available