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The UPM Market Informer

Triumph Celebrates the Acceptance of First KC-46A Tanker by the U.S. Air Force

The U.S. Air Force has accepted the first Boeing KC-46A Pegasus tanker aircraft, setting the stage for the aircraft's delivery to McConnell Air Force Base, in Wichita, Kansas in the coming weeks. Triumph Group is a strategic supplier to Boeing on major structures including horizontal stabilizers, doors, aft fuselage and center wing sections of the tanker. Triumph also provides products for the aircraft both directly and indirectly to Boeing, including the air drive unit.

"This is an exciting and historic day for the Air Force and Boeing, and we are honored to be a part of it," said Dan Crowley, Triumph Group president and CEO. "Triumph values its strategic relationship with Boeing on multiple platforms, especially the KC-46A tanker. With this significant milestone, as well as our strategic involvement with Boeing on the U.S. Air Force T-X Advanced Pilot Training Program, Triumph will have an enduring presence on the next generation of aircraft our country and its allies operate to defend and protect freedom."



Triumph provides similar content for the commercial and freighter variants of the 767 as well as major structures, integrated systems and aftermarket support on key Boeing defense and commercial programs.

During extensive flight testing, six KC-46 completed more than 3,800 flight hours and offloaded more than four million pounds of fuel to A-10, B-52, C-17, KC-10, KC-135, KC-46, F-15E, F-16 and F/A-18 aircraft. The Pegasus has been rigorously tested throughout all aspects of the refueling envelope and in all conditions, including day, night and covert.

The KC-46, derived from Boeing's commercial 767 airframe, is built in Boeing's Everett, Washington facility. Boeing is on contract for 52 of an expected 179 tankers for the Air Force.



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Construction Begins on Airbus' U.S. A220 Manufacturing Facility



Airbus broke ground on a new assembly line for its A220 narrow body in Mobile, Alabama, on Wednesday, giving the company a still stronger foothold in the U.S. even as forces of protectionism and nationalism threaten to disrupt free trade.

"When we did the deal with [Bombardier], it was obvious from the first minute that we should really produce this aircraft also in the United States in these times of protectionism and of nationalism and tariffs and so on," said

Airbus CEO Tom Enders. "But also the single largest market for this wonderful A220 is in North America."

The Airbus boss and Guillaume Faury, president of Airbus Commercial Aircraft, led the celebration and welcomed some 700 attendees including Airbus and other industry executives, Airbus manufacturing employees, state and national dignitaries, and local community leaders.

Airbus has begun building the new assembly line, the company's second U.S.-based commercial aircraft production facility, at the Mobile Aeroplex at Brookley adjacent to the A320 family production line. The company plans to start aircraft production in the third quarter of this year, then deliver the first Mobile-assembled A220 in mid-2020. It expects to finish construction of the new plant by next year.

Over the last three years, Airbus has spent \$48 billion with hundreds of U.S. suppliers in more than 40 states, a level of support that the company says has translated into more than 275,000 American jobs. Airbus facilities in the U.S. include engineering centers in Kansas and Alabama; a major training facility in Florida and soon one in Colorado; materials support and headquarters in Virginia; a think tank (A3) in California; a drone data analysis business (Airbus Aerial) in Atlanta, Georgia; helicopter manufacturing and assembly facilities in Texas and Mississippi; and a satellite manufacturing facility (OneWeb) in Florida. *Source: AIN Online, Photo: Airbus*

UPM to Exhibit at MD&M West

Medical Design & Manufacturing (MD&M) West is where serious professionals find the technologies, education, and connections to stay ahead in the global medical manufacturing community. In addition to more than 1,900 cutting-edge suppliers showcasing the latest solutions in contract manufacturing, manufacturing equipment, automation, R&D, medical device components, materials, plastics, and more, MD&M West hosts the largest three-day medtech conference in North America.

United Performance Metals will be showcasing their medical grades including Titanium CP Grade 2, CP Grade 3, CP Grade 4, Ti-6AL-4V and Ti-6AL-4V ELI, Cobalt Chrome Molly CCM, Stainless Custom 455, Custom 465®, 17-4 PH, 301, 303, 304/304L, 316/316L, 316LS/316LVM, and 410.

MD&M West is a must-attend event for any MedTech professional, and there's no other MedTech event in North America as large or as comprehensive. Join us February 5-7 in the Anaheim Convention Center.



Technically Sophisticated Combined Cycle Plant Comes Online

The Lackawanna Energy Center in Pennsylvania entered commercial operation Jan. 15, with the \$1.5 billion project heralded by its developer, Invenergy, as among the most "technically sophisticated" combined cycle natural gas-fired plants in operation.

The 1,485-MW facility, in the borough of Jessup in Lackawanna County, was completed ahead of schedule and features three General Electric (GE) 7HA.02 high-efficiency, air-cooled natural gas combustion turbines. The facility is expected to provide baseload power to the PJM Interconnection regional transmission organization (RTO) and have the flexibility to respond to spikes in demand, as it balances intermittency on the power grid with the integration of renewables. (A time-lapse video of the plant's construction is available here.)

"This project is as complicated a combined cycle [plant] as they come," said Michael Polsky, Chicago-based Invenergy's founder and CEO, in an interview with *POWER*. "I think it was pretty remarkable how the Invenergy team and our partners, Kiewit [which build the plant] and GE, did this project, I would say flawlessly. We are [opening] a couple of months ahead of schedule."

Said Polsky: "[The plant] has the latest technology. It's the first of its kind to have single-shaft power blocks, where you have the generator and steam turbine in one shaft, with an air-cooled condenser."

Polsky noted that the facility's Administration and Control Building is LEED-Gold certified. It has a rooftop solar array, and Invenergy in a press release said the plant's design is "60% more energy efficient than similar conventional buildings."

Finished Ahead of Schedule

Construction of the plant began in March 2016 and stayed ahead of schedule despite a stoppage in spring 2017 due to a winter storm.

Dave Flickinger, executive vice president of Kiewit Corp., said, "Designing and building the Lackawanna Energy Center required the largest staff and craft workforce ever assembled by Kiewit Power Constructors Co. "It's been an excellent experience partnering with Invenergy, who values worker safety and project execution as much as we do. We're proud to have been part of the team that successfully delivered this important project."

Feedstock gas for the plant is supplied by Cabot Oil & Gas via two pipelines: Kinder Morgan's Tennessee Gas Pipeline, and another operated by UGI.

The plant joins two other gas-fired facilities that have recently started up in Pennsylvania. Tenaska's 940-MW West-moreland Generating Station began operating on Dec. 21, 2018. That same day, developer McDermott International announced that Calpine Corp.'s York 2 Energy Center in Peach Bottom achieved first fire and steam blows of its Units 5 and 6. York 2 Energy Center is an 828-MW, dual-fueled plant at the same site as Calpine's York Energy Center. The combustion turbines will primarily use natural gas but also can run on ultra-low-sulfur diesel fuel oil. Source: Power Magazine, Photo Jason Farmer



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- AS9100D
- ISO9001:2015
- ISO 13485
- GE Aviation S1 (S1000)
- Pratt & Whitney LCS

LASER CUTTING APPROVALS:

- NADCAP AS7116
- GE S422



Surcharge Totals November 2018 - April 2019

	Nov	Dec	Jan	Feb	Mar	Apr
15-5	0.5286	0.5139	0.4790	0.4682	*	*
15-7	0.7753	0.7487	0.7039	0.6837	*	*
17-4	0.5231	0.5107	0.4767	0.4647	*	*
17-7	0.6197	0.5873	0.5321	0.5292	*	*
201	0.5169	0.4968	0.4543	0.4490	*	*
301 7.0%	0.6139	0.5825	0.5277	0.5246	*	*
302/304/304L	0.6666	0.6303	0.5697	0.5678	*	*
304-8.5%	0.6883	0.6494	0.5867	0.5854	*	*
305	0.8447	0.7884	0.7097	0.7123	*	*
309	0.8781	0.8215	0.7378	0.7410	*	*
310	1.2002	1.1087	0.9920	1.0030	*	*
316/316L	0.9460	0.9018	0.8389	0.8228	*	*
316LS/316LVM	1.2200	1.1400	1.1100	*	*	*
317L	1.1142	1.0660	0.9976	0.9748	*	*
321	0.7001	0.6588	0.5953	0.5945	*	*
347	1.0097	0.9684	0.9049	0.9041	*	*
409/409 Mod	0.2508	0.2547	0.2392	0.2275	*	*
410/410S	0.2582	0.2621	0.2456	0.2340	*	*
430	0.3011	0.3047	0.2816	0.2707	*	*
434	0.3805	0.3849	0.3631	0.3461	*	*
439	0.3102	0.3138	0.2893	0.2785	*	*
440A	0.3011	0.3047	0.2816	0.2707	*	*
2205	0.9083	0.8882	0.8389	0.8105	*	*
263	10.8405	9.7101	9.0419	9.0396	8.7744	8.1914
276	5.6411	5.6731	5.3623	5.2863	4.9542	4.8268
A286	1.6116	1.5740	1.4268	1.4048	1.2671	1.1942
330	2.0116	1.9460	1.7418	1.7080	1.5083	1.4042
400	3.5365	3.3883	3.0746	3.0360	2.6645	2.5065
455	0.6800	0.6200	0.6300	*	*	*
465	0.8300	0.7700	0.7700	*	*	*
600	3.8412	3.7080	3.3263	3.2486	2.8281	2.6425
601	3.3532	3.2436	2.9116	2.8487	2.5046	2.3368
617	8.2215	7.6141	7.0881	7.0476	6.7235	6.3381
625	5.9410	5.9070	5.5805	5.5100	5.1717	5.0201
718	5.6919	5.6263	5.3430	5.2874	4.9963	4.8583
X-750	4.4003	4.2708	3.8974	3.8219	3.4131	3.2307
825	2.6616	2.6159	2.3896	2.3497	2.1291	2.0167
HX	3.8391	3.7980	3.5220	3.4674	3.2009	3.0669
188	16.3800	15.0800	14.2300	*	*	*
CCM	25.5700	24.9800	21.9400	*	*	*
L-605	19.8400	18.3100	17.3300	*	*	*

^{*}Surcharge currently not available