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'Crazy Things Can Come True' : Elon Musk Reacts to Falcon Heavy Launch Success

Cape Canaveral, FL—After the successful first launch of the Falcon Heavy megarocket yesterday (Feb. 6), which is propelling a Tesla electric car out into the solar system, SpaceX CEO Elon Musk still seemed surprised that the mission had succeeded.

Instead, the launch went off almost without a hitch — the rocket's second stage made it into orbit, and the Falcon 9 first stages that served as the rocket's two side boosters detached and returned to land on Earth. Only the center "core" booster failed to land on its intended drone ship: "Apparently it hit the water at 300 miles an hour and took out two of the engines on the drone ship," Musk said. "That sounds like some pretty fun footage, so if the cameras didn't get blown up as well, then we'll put that out for a blooper reel."

Musk arrived at the news conference late after visiting the two boosters that landed nearly simultaneously shortly after the launch. Although the side boosters aren't set to fly again, both were in good flying condition, he said — luckily for SpaceX, as the boosters had new, "super expensive and awesome" titanium grid fins to help guide their flight.

After the launch, SpaceX surprised viewers with a livestreamed view from the red Tesla, showing the vibrant sphere of Earth passing by as the car (and the rest of the payload) rotated through space.

"I think it looks so ridiculous and impossible," Musk said. "You can tell it's real because it looks so fake, honestly. We'd have way better CGI if it was fake. The colors all look kind of weird in space. There's no atmospheric occlusion; everything's too crisp."

He noted that SpaceX hadn't tested the car's materials for survival in space, although the mannequin riding in the driver's seat is wearing a working spacesuit designed by the company. The car's dashboard also hosts a miniature car with its own even tinier rider.

"It's just literally a normal car in space — I kind of like the absurdity of that," Musk said. "It's kind of silly and fun, but I think that silly, fun things are important ... I think the imagery of it is something that's going to get people excited around the world, and it's still tripping me out. I'm tripping balls here."

SpaceX doesn't have any plan for the electric car once it's set on its elongated orbit around the sun, Musk said. *Continued on page 3 sidebar*



Inside This Issue

Falcon Heavy Launch Success1
232 Report2
Base Price Increases3
Barnes Aerospace Expansion 3
Trump Infrastructure Plan3
Surcharge Update4

Hot Off the Press

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Secretary Ross Releases Steel and Aluminum 232 Report in Coordination with White House

Friday, February 16, Secretary Wilbur Ross released reports on the U.S. Department of Commerce's investigations into the impact on our national security from imports of steel mill products and from imports of wrought and unwrought aluminum. These investigations were carried out under Section 232 of the Trade Expansion Act of 1962, as amended. All classified and business confidential information in the reports was redacted before the release.

"I am glad that we were able to provide this analysis and these recommendations to the President," said Secretary Ross. "I look forward to his decision on any potential course of action."

The Department of Commerce found that the quantities and circumstances of steel and aluminum imports "threaten to impair the national security," as defined by Section 232. The reports are currently under consideration by the President, and no final decisions have been made with regard to their contents. The President may take a range of actions, or no action, based on the analysis and recommendations provided in the reports. Action could include making modifications to the courses of action proposed, such as adjusting percentages. The President is required to make a decision on the steel recommendations by April 11, 2018 and on the aluminum recommendations by April 19, 2018.

Key Findings of the Steel Report:

- The United States is the world's largest importer of steel. Our imports are nearly four times our exports.
- Six basic oxygen furnaces and four electric furnaces have closed since 2000 and employment has dropped by 35% since 1998.
- World steelmaking capacity is 2.4 billion metric tons, up 127% from 2000, while steel demand grew at a slower rate.
- The recent global excess capacity is 700 million tons, almost 7 times the annual total of U.S. steel consumption. China is by far the largest producer and exporter of steel, and the largest source of excess steel capacity. Their excess capacity alone exceeds the total U.S. steel-making capacity.
- On an average month, China produces nearly as much steel as the U.S. does in a year. For certain types of steel, such as electrical transformers, only one U.S. producer remains.
- As of February 15, 2018, the U.S. had 169 anti-dumping and countervailing duty orders in place on steel, of which 29 are against China, and there are 25 ongoing investigations.

Recommendations of the Steel Report:

Secretary Ross has recommended to the President that he consider the following alternative remedies to address the problem of steel imports:

- 1. A global tariff of at least 24% on all steel imports from all countries, or
- 2. A tariff of at least 53% on all steel imports from 12 countries (Brazil, China, Costa Rica, Egypt, India, Malaysia, Republic of Korea, Russia, South Africa, Thailand, Turkey and Vietnam) with a quota by product on steel imports from all other countries equal to 100% of their 2017 exports to the United States, or
- 3. A quota on all steel products from all countries equal to 63% of each country's 2017 exports to the United States.

Each of these remedies is intended to increase domestic steel production from its present 73% of capacity to approximately an 80% operating rate, the minimum rate needed for long term viability of the industry. Each remedy applies measures to all countries and all steel products to prevent circumvention.

The tariffs and quotas would be in addition to any duties already in place. The report recommends that a process be put in place to allow the Secretary to grant requests from U.S. companies to exclude specific products if the U.S. lacks sufficient domestic capacity or for national security considerations. Any exclusions granted could result in changed tariffs or quotas for the remaining products to maintain the overall effect. *Source: US Department of Commerce, 02/16/2018*





Barnes Aerospace Division to Expand Singapore Operations

Barnes Aerospace, a business unit of Bristol-based Barnes Group Inc., said Monday it is investing more than \$20 million to expand manufacturing operations in Singapore.

The move is expected to increase its capabilities in the Asia market. The investment will provide an additional 40,000 square feet of manufacturing space as well as equipment and machinery.

Barnes Aerospace has a long-established presence in Singapore where its operations support the global aerospace industry with the production of engine component parts and repair services.

The company said it will add 5-axis milling and grinding, electron beam and laser welding and 3-D printing in the expanded space. These processes will support increased production of engine components for "ramping" engine platforms – those that power the world's newest single and twin-aisle commercial aircraft, said Michael Beck, senior vice president, Barnes Group Inc., and president of Barnes Aerospace. Source: Hartford Business.com

Base Prices Increase in Q1

ATI Flat Rolled Products announced an increase in base selling prices for nickel-based alloys by 3-5% in both the sheet and plate product forms for the following alloys: ATI 20[™], ATI 22[™], ATI 36[™], ATI 59[™], ATI 200[™], ATI 201[™], ATI 263[™], ATI 276[™], ATI 400[™], ATI 600[™], ATI 601[™], ATI 625[™], ATI HX[™], ATI 718[™], ATI X-750[™], ATI 617[™], ATI 605[™], ATI 188[™], ATI 75[™], ATI 800[™], and ATI 825[™].

PCC Metals Group, comprised of TIMET and Special Metals will raise base prices by 3-5% and apply an electrode surcharge to all product forms of \$0.05/lb. for the following alloys: INCONEL alloy 600, INCONEL alloy 601, INCONEL alloy 22, INCONEL alloy 622, INCONEL alloy C-276, INCONEL alloy HX, INCONEL alloy 625, INCONEL alloy G-3, INCOLOY alloy 020, INCOLOY alloy 028, INCOLOY alloy 800, INCOLOY alloy 803, INCOLOY alloy 825, INCOLOY alloy 25-6HN, INCOLOY alloy 27-7MO, NILO alloy 36.

Outokumpu implemented a price increase on all PIE/non-contract orders. Cold Rolled 200, 300 & 400 Series had their discount reduced by 2 total points. CMP base pricing was increased by .02/pound. Polish extra was reduced by 10 percentage points.

Universal Stainless & Alloy products raised base prices by 3-10% for non-contract specialty steel long product orders.

Carpenter Technology raised base prices by an average of 5% on new non-contract orders of high-temperature, electronic and premium alloy steels across all product forms.

North American Stainless (NAS) is increasing base prices for stainless flat-rolled and bar products effective with March 1 shipments. 200, 300 and 400 series cold-rolled products will have 1% point reduction in functional discount. Hot-rolled products will increase \$30 per ton. Cold-drawn, peeled bar and wire rod will increase \$40 per ton.

Falcon Heavy Launch Success Continued

"After that it's just going to be out there in space for maybe millions or billions of years," he added. "Maybe discovered by some future alien race thinking 'What the heck? What were these guys doing? Did they worship this car? Why do they have a little car in the car? And that'll really confuse them."

Musk said SpaceX was almost done with the development of the Falcon 9 and Falcon Heavy, and would soon turn its focus to the upcoming rocket currently nicknamed BFR. (The company's Dragon spacecraft, which currently carries cargo to the International Space Station and may soon carry crewmembers, is nearing its last version as well, Musk said.) Although the Falcon Heavy could do that as well, and is capable of launching things directly to Pluto and beyond, the BFR is designed to work more efficiently for interplanetary travel.

But at least at the news conference, Musk held off on BFR discussion to celebrate the successful first launch of a vehicle with more than twice as much payload capacity of any other existing rocket — the most powerful working rocket in the world, which took SpaceX four more years of development than initially anticipated.

"Crazy things can come true," Musk said. "I didn't really think this would work — when I see the rocket lift up, I see a thousand things that could not work, and it's amazing when they do."

"I've seen rockets blow up so many different ways, so it's a big relief for when it actually works," he added. *Space.com*

Trump Announces \$1.5 Trillion Infrastructure Plan

In the budget proposal President Donald Trump released Monday, the infrastructure plan of \$1.5 trillion appeared to be an early valentine to steel, aluminum and the entire domestic manufacturing industry.

Infrastructure spending benefits the metals industry in two ways, providing improved conditions to move metal from the mill to the service center or the service center to end user, making the domestic manufacturing sector more competitive in the process. At the same time, many of these investments require increased consumption of steel and other metal products to complete.

However, the plan only calls for \$200 billion in federal investments, with the rest coming from some undetermined combination of state, local and private funding. And any plan is merely a blueprint, with a contentious congress left to hash out the full budget plan.

Groups like the American Trucking Associations and the American Association of Railroads were glad the president has put the issue front and center, but are not enthused by how the plan will be funded.

There's a long way to go between the nonbinding budget plan laid out by the president and what ultimately is produced by Congress. Let's hope whatever the latter produces keeps the president's priority for an infrastructure overhaul, but with a clear-cut way to fund it. *Source: Metal Center News*





Surcharge Totals December 2017—May 2018

Grades	Dec	Jan	Feb	Mar	Apr	May
15-5	0.4931	0.4524	0.4861	0.5036	*	*
15-7	0.6391	0.5998	0.6970	0.7596	*	*
17-4	0.4929	0.4513	0.4829	0.4973	*	*
17-7	0.5714	0.5101	0.5609	0.6002	*	*
201	0.4840	0.4336	0.4665	0.4927	*	*
301 7.0%	0.5667	0.5054	0.5551	0.5932	*	*
302/304/304L	0.6191	0.5511	0.6066	0.6502	*	*
304-8.5%	0.6293	0.5694	0.6280	0.6744	*	*
305	0.7883	0.7022	0.7820	0.8474	*	*
309	0.8290	0.7336	0.8131	0.8758	*	*
310	1.1380	1.0080	1.1297	1.2333	*	*
316/316L	0.8054	0.7460	0.8643	0.9460	*	*
316LS/316LVM	1.0700	1.0500	1.2700	*	*	*
317L	0.9333	0.8705	1.0197	1.1205	*	*
321	0.6481	0.5784	0.6401	0.6892	*	*
347	0.9578	0.8881	0.9497	0.9988	*	*
409/409 Mod	0.2080	0.1925	0.2003	0.2003	*	*
410/410S	0.2169	0.1995	0.2072	0.2072	*	*
430	0.2693	0.2399	0.2473	0.2473	*	*
434	0.3172	0.2923	0.3185	0.3287	*	*
439	0.2806	0.2485	0.2557	0.2557	*	*
440A	0.2693	0.2399	0.2473	0.2473	*	*
2205	0.7519	0.7020	0.8158	0.8859	*	*
263	7.2440	7.3977	7.4595	7.8741	8.7194	9.5493
276	3.7369	4.0000	4.1660	4.4784	4.4253	5.2620
A286	1.0129	1.1153	1.1137	1.2366	1.1441	1.3667
330	1.2534	1.3875	1.3971	1.5744	1.4251	1.7052
400	2.3819	2.5286	2.5921	2.9235	2.7200	3.2672
455	0.6600	0.6300	0.7200	*	*	*
465	0.7700	0.7400	0.8800	*	*	*
600	2.4417	2.6449	2.6794	3.0531	2.7863	3.3635
601	2.1522	2.3569	2.3837	2.6895	2.4443	2.9180
617	5.5215	5.7249	5.7558	6.1427	6.5170	7.3342
625	4.3039	4.5371	4.5376	5.0202	4.8678	5.5352
718	4.2751	4.4623	4.4733	5.0118	4.8374	5.3154
X-750	2.9940	3.1960	3.2293	3.6314	3.3689	3.9301
825	1.7295	1.8948	1.8995	2.0984	1.9619	2.3473
нх	2.5118	2.7158	2.7218	2.9709	2.8885	3.4680
188	14.1200	15.9200	17.2000	*	*	*
ССМ	23.0500	27.7100	30.0800	*	*	*
L-605	17.2000	19.5400	21.0400	*	*	*

*Surcharge currently not available