

## HAI Heli-Expo 2020



Exhibit hall main concourse



SDFD S-70 Firehawk



High Performance Helos S-70



Robinson Helicopters line



Express Helicopters K-MAX

Rotorheads,

It's been a quiet couple of months. The virus has everyone indoors and everything is pretty calm at the museum. Personally, I'm sequestered at home but up to my eyeballs with work to teach two online community college classes. As a result, I have not been able to collect happenings at the hangar for the past couple of months. Hopefully that will change with the coming of summer. So, I'm sending what I gathered while at HAI.

HAI, Helicopter Association International, held its annual exposition in Anaheim, California from January 28 to 30. So just a couple of blocks down the street from Disneyland the Anaheim Convention Center opened its doors to another sort of fantasyland, a land of rotors, turbines and technology and the equipment, accouterments and people that make it all come true. The huge convention center multiple exhibit halls accommodated hundreds of exhibitors and aircraft and probably at least 10,000 or more people. While I took lots of pictures, I didn't take any written or audio notes. I'll share all of the pictures in the order that I took them and caption them where I can. One thing that I did notice was that the most displayed airframe was variants of the Sikorsky S-70/H-60, most of which were firebombers. Starting with a beautiful San Diego Fire Dept. **S-70 Firehawk** and then right over to a restored LAFD vintage **Bell 47-G3B** followed by a High Performance Helicopters **S-70 firebomber**. From there it was over to an opened up **Sikorsky S-76D** corporate helo and a beautiful Pinal County, Arizona Sheriff Dept. **UH-1V Huey** SAR bird called "Air One" (I didn't know there was a V model Huey either.). The V model is a UH-1H converted specifically for Medevac use. From there it was to the



Overhead view of display area



LAFD vintage Bell 47-G3B



Sikorsky S-76D corporate helo



PCSD Arizona UH-1V SAR helo



Horizons Helos AS332 Firecat





**MD 540 Armed Scout**



**Bell 505 and 407 Rangers**



**Guimbal Cabri G2**



**Safran Arrano 1300 SHP turbine**



**Safran Aneto 2500 SHP turbine**

Robinson display where all of their sweet birds were lined up for complete access: **R22 Beta II**, **R44 Cadet** and **R66 Turbine** (Yes, they are sweet, you gotta love a Robbie.). Then, the big yellow bird, a Helicopters Express Kaman **K-MAX** semi-autonomous controlled bird used in the Kaman UAS development program which the Marines used successfully in Afghanistan, followed by a Horizons Helicopters Firecat, the Firecat an Airbus **AS332L1 Super Puma** with a 1000 gallon water tank which will be fighting fires in the Yukon. MD Helicopters had a **MD540** armed scout on display across from a Cal Fire United Rotorcraft **S-70 Firehawk** with a 1000 gallon water tank. The big boy in the Bell display was the **Bell 525 Relentless** 16 pax fly-by-wire medium lift helo in dark green and black corporate colors next to a lineup of smaller Bells starting with a **Bell 505 Jet Ranger X** and **Bell 407GX i LongRanger** a fully instrumented IFR bird for HEMS (Helicopter Emergency Medical Services). Around the corner was a cute little French **Guimbal Cabri G2** touted as the "little big helicopter". Two very cool aircraft were all electric. A Lung Biotechnology semi-autonomous **Electric R44** with a twin electric motor drive powered by an 1100 lb lithium polymer under-slung battery pack. Additionally there was an Airbus **VAH001 Vahana** electric tilt-wing eVTOL. It had twelve electric motors, eight for the 8 props and four for the 4 tilt-wings powered by a 38 KWH battery. Google those!

Engines, accessories and gear. The engine section included some beefy packages like the **Safran Arrano 1300 SHP** turbine and the even beefier **Safran Aneto 2500 SHP** turbine for the medium lift market. Safran Helicopter Engines is a French company

with a plant in Texas now whose sole focus is helicopter engine production, although they are also entering the turboprop market, and whose engines have logged over 10 million flight hours since 1996.



**United Rotorcraft S-70 Firehawk**



**Bell 525 Relentless**



**Lung Boitech Electric R44**



**Airbus electric tilt-wing eVTOL**



**Helicopter flight simulator**





**Bunches of Helmets**



**Sikorsky VS-300 Model**



**Sergei and Alana Sikorsky**



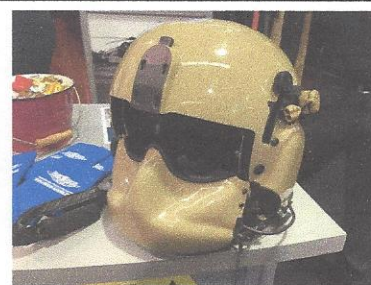
**Sikorsky VS-300 in 1939**

Along with the engines some **Flight Simulators** were on display. I really liked this one because it was compact and its linked flat screen displays would make an ideal addition to the museum. We've been wanting a flight simulator for a long time, maybe one day. Other accessories included hundreds of avionics and flight suits and **Helmets**. Some of the helmets had additional accessories like lower face protectors. There were also some Aircraft Model Makers like these from **Griffin Custom Model Aircraft** who made some models for the museum model room. Finally we were able to visit with **Sergei Sikorsky** and his lovely wife Alana and get an autographed copy of The Sikorsky Legacy for the museum library. A great book available through several online sources.

While I only talked about 25 aircraft, accessories and encounters, there were probably at least 100 aircraft and hundreds of vendors on display. Let's wrap it up with some history. This year is the 80<sup>th</sup> anniversary of the first untethered flight of the Vought-Sikorsky VS-300. Igor Sikorsky built his first two helicopters the H-1 and H-2 in 1909 and 1910 in Russia. Both designs were of coaxial configuration but underpowered and not able to get airborne. Because of the technical and power limitations of the day, he focused his considerable engineering talent to a very successful

fixed-wing career. All of this history with hundreds of pictures is covered in Sergei's book. It wasn't until 1938 that he had financial backing to continue his rotary-wing work. The VS-300 initial design was first test flown by Igor Sikorsky in September 1939. The refined VS-300 design had its first untethered free flight on May 13, 1940 with Igor again at the controls. The original VS-300 is in the Henry Ford Museum in Dearborn, Michigan. The Classic Rotors Museum's earliest Sikorsky is a 1947 model S-52. When the weather warms up and the virus threat winds down, hop into your personal buggy and come up to see our magnificent collection. Until then stay safe and healthy.

Chip out



**Helmet with face protector**



**UH-1 Gunship Model**



**Sikorsky H-2 in 1910**



**Sikorsky VS-300 in 1940**