



Perseverance rover's successful touchdown

Comat « The Rescue Team »

After a long travel (more than 200 days!) the Mars rover equipped with the SuperCam camera (made in Toulouse, France), is able to begin its mission: "Finding out signs of life on Mars".

Comat was in the front row to follow this event in real time. Benoît Moulas (Comat's Chairman) and Ludovic Daudois (Comat's CEO), were together with the French Space Agency (CNES), the Institute for Research in Astrophysics and Planetology (IRAP), and the Cité de l'espace, to watch Perseverance touching down.

The French Space Agency entrusted Comat with the industrialisation and manufacturing of the SuperCam camera case. Comat's teams then took part in the assembly and tests, together with CNES and IRAP's teams.

On October 31st, 2021, a few months only before delivering SuperCam to NASA, the unthinkable occurred. Something happened, which led us to make the SuperCam case again, with the utmost urgency.

On November 1st, Ludovic Daudois was called by Sylvestre Maurice, astrophysicist at IRAP's and in charge of the SuperCam project: "Without you, we won't make it".

The very next day, Comat began to re-manufacture parts for the new flight model. We set up an action plan, found out the material to re-manufacture the 400 parts required, and involved our suppliers who were ready, willing and able to help. We had to re-schedule on-going projects to free up time, re-assign machines and involve Comat's collaborators in taking up the challenge.

And the challenge was met! Within two months, we achieved what we had previously made within nine months.

Marius Ferry was the project manager in charge of the manufacturing of mechanical parts at Comat's, and deputy leader of their assembly at IRAP's. Clément Barrière, mechanical engineer, was part of the AIT team at IRAP's.

Our team worked two shifts, including at week-ends. About fifteen people were mobilised , even during the Christmas break, so that SuperCam parts could be delivered to IRAP before mid-January.

Indeed, the next stage was integration at IRAP's. We only had 6 months to re-make everything that had been achieved within one year for the first flight instrument: assembling, testing and delivering a new flight model.

The number of people involved in the AIT team was doubled. NASA trusted CNES and sent two JPL engineers to support us.

At the end of June, after eight intense months, the camera was ready. Part of the team, including Marius and Clément from Comat, accompanied SuperCam's delivery to JPL.

All the Comat people involved in the project remember the intensity of this second stage. There was much pressure, we were short of time, and there was no room for error.

«Since 2004, Comat has been supporting us in our adventures on the surface of Mars – a time-tested, much appreciated partnership! » says Sylvestre Maurice.

« Our experience in space was of vital importance, the stakes were high, we had no margin for error » tells Benoît Moulas.

Since January 2021, Comat has been a partner of the Cité de l'Espace in the creation of two new exhibition areas: the Martian ground, where Perseverance and SuperCam models will be displayed, and the original exhibition of the Alpha mission carried out by French astronaut Thomas Pesquet, who will soon be back to the ISS.

« Our partnership with Cité de l'espace is a great sounding board, both to show what we are capable of, and to congratulate our teams on the work they performed. This could be as well a way to attract new profiles, motivated for future projects. We have great ambitions in the coming years, both at European and global levels. » adds Ludovic Daudois.

With its participation in the major missions led by the main national and international space organisations, Comat holds great prospects.

Comat (100 people), a French company located in Toulouse, is a strategic equipment supplier of the space sector. The company specialises in complex mechanical solutions, especially in scientific instruments for space exploration. For more than 45 years, Comat has been offering disruptive solutions of satellite mechanical equipment, and of orbit control with its reaction wheels and plasma propulsion for smallsats.