

# **K.S.Institute of Technology**

## **Bangalore**



### **INDUSTRIAL REPORT**

**Department of Electronics and Communication Engineering**

**(26<sup>th</sup> September, 2018)**



The department of Electronics and Communication Engineering, K.S.I.T organized one day industrial visit to NAL-CSIR (National Aerospace Laboratories-Council of Scientific and Industrial Visit) Wind Tunnel Centre

located at Old Airport road, Kodihalli, Bangalore on 26<sup>th</sup> of September, 2018 for 3<sup>rd</sup> semester students of Electronics and Communication Engineering students.

The visit was organized with the prior permission and guidance of our **Principal T.V. GOVINDARAJU** and **H.O.D Dr. P.N SUDHA** along with the staff members.

**Dr. SUDARSHAN.B** had taken hard efforts to make this visit a grand success.

**Prof. Pragathi** and **Prof. Sampath Kumar** teaching faculty of **E.C.E.** department accompanied us for the industrial visit.

**Mr. Somnarayan** of **NAL-CSIR** guided us throughout our visit.

The details of our journey are as follows:

- ❖ We started our journey to **NAL-CSIR** from Raghuvanalli, **K.S.I.T** campus at 9:45am.
- ❖ We reached **NAL-CSIR** at 11:30am.
- ❖ At 11:40am, we were taken to the wind tunnel unit, where the aircraft's designs and the model's tolerance are tested.
- ❖ At 12:10pm, we were taken to **ISRO-NAL ACOUSTIC FACILITY**, where the sound tests are held for the designs and the models of the rockets developed. We were also introduced to the reverberation chamber, where the models are placed during testing. The sound source is a **Electropneumatic Transducer(EPT)**, and the frequency of the sound produced is enhanced in the reverberation chamber. The chamber is of length **10.3m**, breadth **8.2m** and height **13m** in which most of the models to be tested could fit in.
- ❖ At 12:35pm, we were taken to the **NAL-CCADD (Centre for Civil Aircraft of Design and Development)** where we were had an opportunity to see the **Hansa-NG VT-HBL** aircraft, a metallic stripped aircraft for safe landing. It has a flight time of **4 hours** which can fly up to **8000ft** altitude and requires a **500m** runway.
- ❖ Mr. Somanarayan told us that they had sold 14 such aircrafts to various flying clubs. And that it costs about **₹65-70lakhs**.
- ❖ Our industrial visit came to an end at 12:45pm.

The industrial visit was organized with the permission of **NAL-CSIR, Bangalore**.

## **OBJECTIVES**

The main objective of our visit to **NAL-CSIR** was to increase our knowledge on the applications of our field of study – Electronics and Communication Engineering.

**NAL-CSIR** tests and designs the aircrafts to be used commercially and also the aircrafts that are launched by various space stations and is located all over India.

Aircrafts play a very vital role in the today's technological world. Our lives are unimaginable without our satellites in space, and the fighter planes manufactured for the country's safety and many more.

Modern civil Aviation in India traces back to **18 February 1911**, when the first commercial civil aviation flight took off from Allahabad for Naini over a distance of 6 miles (9.7 km).

And now, India has attracted the major aerospace defense manufacturers with its low production cost and the government's strong emphasis on building the manufacturing sector under the "Make in India" initiative.

India is also rated among the largest markets by internationally linked small- and medium-size enterprises (SMEs) which plans to expand supplies to Indian customers or form joint ventures in the country to make their components for exports.

As a future engineer and an Indian it is important to understand the effort and also the technology behind this success and follow the same.

## **CONCLUSION**

This industrial visit was very delightful and our guiding staff was very supportive.

The visit helped us in understanding the technology and also the amount of hardwork used to manufacture aircrafts and its application.

We are sure that this will bring a positive change in our thinking and practical behavior regarding our education. We are heartily thankful to our **MANAGEMENT, PRINCIPAL, HOD** and all our **PROFESSORS** for conducting this visit and we request for more such interesting and educative industrial trips to be conducted.

Prepared by: Ana Epsiba F (ECE, 3<sup>rd</sup> semester)