Crescent IJNE



SPECIAL EDITION

ATAL TUNNEL STUDY TOUR NOVEMBER 2021

ATAL TUNNEL, ROHTANG

This is an experience sharing edition of our students who were on their study tour to Manali, Himachal Pradesh to learn about the engineering marvel Atal tunnel. This tour was arranged and funded by AICTE under Yuvak Scheme in collaboration with Border Roads Organization (BRO). A team of 15 M.Tech. students from the Department of Civil Engineering was approved by our management for the visit.





It was a pleasant early morning, on the day of 23rd September of 2021. The first leg of the journey started from our college to Perambur railway station. The team boarded the MDU- CDH train to reach Chandigarh. Two full days were spent in the forward journey. As it was a north going train, we suffered a lot communicating with the vendors as only a few of us know Hindi.

On day 1, we had packed food for us from home. For the second day, we ordered some food in the train, which was not so tasty to consume. All the food items were highly priced than the MRP, and we started to fight with all for this. During the train journey, one staff of IRCTC helped us how to deal with this people. She gave IRCTC complaint no. where we can register without complaint.





On day 3, we reached Chandigarh early in the morning. We reached Manali by van around 9 at night. It was a 12 hour travel. The scenery throughout the travel was breath taking. The Beas River which runs throughout the state of Himachal Pradesh added beauty to the scenery. After reaching Manali, we freshened up and some students went out to try some local dishes for dinner.

On day 4, we went to the biker's paradise, Rohtang pass below which the Atal tunnel has been constructed. Rohtang pass is one of the highest places in India, which was a 3 hrs travel from the place we stayed.

On Monday, 27th of September, we planned to visit the engineering marvel Atal tunnel.





The lieutenant explained the type of construction technique practiced, the typical region of the tunnel, usage of tunnel and the problems faced after which we had an interactive session. After the discussion, we went to the tunnel to see for ourselves and learn about the structure. We acquired necessary knowledge about the tunnel and its construction technique.

ABOUT ATAL TUNNEL

Atal tunnel which was earlier known as Rohtang tunnel is the longest tunnel in the world located 10,000 feet above sea level. The foundation stone was laid by Late. Atal Bihari Vajpayee, the former Prime minister of India. This came into public use from 3rd October 2020 opened by our honourable Prime Minister Narendra Damodardas Modi.



Rohtang means pile of corpses in Ladakhi language; it is called so because during winter season many people who try to cross the pass died in this pass due to lack of oxygen and temperature change. People could use the Rohtang pass only during summer and non-winter season. The tunnel has been constructed between Manali and Keylong.

Before the construction of the tunnel the motor route was through Grampu which is 116 km long and took about 5 to 6 hours to travel and during winter which might take about 9 hours to cross this route. So, in order to reduce the time and distance of the travel the BRO came up with a proposal of Tunnel in the region of Seri Nala. As this region falls in the border of the nation it was constructed and maintained till date by BRO. This tunnel was not only for the public utility but also for defence purpose. In case of emergency this tunnel acts as a quick link road to reach the border during all seasons. Construction of this tunnel took about 10 years which was actually proposed as a 5-year project. The design of the tunnel is single tube double lane horse shoe. It means the tunnel is a single tube with two-way traffic with horse shoe design. The tunnel was constructed by NATM method (New Australian Tunneling Method). In this method drilling and blasting are used as the main method for tunneling. The height of the tunnel is 2.25m and width of the tunnel is 3.6m wide. Above the road way it has been equipped with semi-transverse ventilation system. The tunnel section has been fixed with 3 large fans which are used ventilation. It sucks the dust particles and pollution from within and exhales outside the tunnel. Beneath the tunnel structure there comes the egress passage which is particularly used in case of emergency. This egress passage runs throughout the length of tunnel. The exit passage has been encounter at each 500m which connects the egress passage in the bottom of the tunnel. With accordance to the pollution level, the tunnel has been restricted with 3000 petrol cars and 1500 diesel truck/ car.

On the way back to the hotel in the afternoon, we visited Shollang valley which is a tourist spot where ATV ride, Paragliding and Rope car cannot be missed. Our students enjoyed all the activities. Unfortunately, we went during the summer and could not experience the snow, but we were the first batch in the country to visit the tunnel.



On the next day, while returning to Chandigarh we went for river rafting on Beas River. The rafting was 10km ride, as we were 15 pax totally we took two rafting boats. We enjoyed a lot during the trip and it was a mind-blowing experience which would be registered in mind throughout our lives. Towards the end of the trip, we saw a metal bridge that connects one of the villages which was completely decorated with Ladakh flag, where we took our pictures.



We reached Chandigarh late at night and stayed there. We were about to catch a morning train from Chandigarh to Delhi. However, we reached Chandigarh station 30 mins earlier than the train arrival time. But unfortunately, it was a connecting train which halts only 2 mins in Chandigarh. We found it really harto board the train as there was a huge crowd and we had a lot of luggage. Only 10 students were able to board the train when the train started moving. The remaining of us thought that we had to take the next train. As everyone says humanity still exists, the guard of the train stopped the train for another minute on seeing us. Thus we managed to hop on the train. It was a 4 hour travel to reach Delhi. It was already a week since we had a taste of our state food. So, during the travel our students somehow managed to get the contact of hotels so that we could eat good food during the travel. In Delhi we had a food from Tamil Nadu hotel managed and controlled by a Tamilian. We had mouth-watering food. On the last day of the study tour, we were in train on our way to Chennai. We contacted a person and ordered Hyderabad biryani from Warangal for lunch as we were in Warangal by that time. It was our best food throughout the trip.



The next morning we reached Chennai around 4 am. Our college bus was already arranged to pick us up. We finally reached college by 6.30 a.m. It was an awesome trip where our students learnt a lifetime experience and knowledge about the tunnel. We would like to thank our Management and the Committee of AICTE for the wonderful experience.



The study tour was quite good with my beloved students. We boarded the train in Perambur and we reached Manali in 2 days. We visited Atal Tunnel and gained knowledge about Tunneling Techniques. We enjoyed some adventurous activities which should be tried once in a lifetime. The climate was good and we reached Chennai with all my students safely.

> Dr. K. YOGESWARI Associate Professor

We are very much thankful to the college management and AICTE for providing this magnificent opportunity to visit the "ATAL Tunnel" and acquire knowledge about its construction and challenges faced during its construction process. The study tour was both entertaining and educational. we felt very much grateful to learn from the BRO themselves and interacting with their engineers gave us knowledge from a broader perspective. Besides, we also engaged in many adventurous activities, trekking, visited historical and popular places and tried different cuisines, all of these were remarkable and unforgettable. Overall, this tour acted as an opportunity to learn, travel, and spend valuable as well as memorable time with our friends and faculty.



MOINUDDIN H (M TECH – CEPM)
ARUN KUMAR A (M TECH – CEPM)
GOUTHAM A (M TECH – Structural Engineering)
HARISH KUMAR V (M TECH – Structural Engineering)

Mr. A. SHIEK FARID Assistant Professor



We explored many things like adventure, knowledge, culture, historical places, traditions & foods in Manali, Himachal Pradesh. We had a lot of fun and gained knowledge as well regarding the construction of the Atal tunnel. We thank everyone for making this trip memorable and useful.

-- ANUSHA K (M TECH – CEPM) -- CAROLINE DEEPIKA A (M TECH – Structural Engineering)



I thank our management and our Dean for approving this study tour. Thanks to my fellow teammates for making this tour memorable. The number of memories and fun made, cannot be expressed easily. Every day we had something to make the day memorable. On the last day, we missed the train, somehow, we chain stopped the train and boarded. I was the last guy to board the train even after the train stopped. Those were remarkable experiences.

-- S. LOGARAJAN (M TECH - CEPM)



I am very much delighted to be a part of this study tour to Atal tunnel. I am very much thankful to our management, AICTE, BRO for giving me this opportunity. This tour gave us a wide exposure to construction and advanced technology used for tunneling, exploring adventures was also the fun part of this trip. Individual unity was learned from this study tour.

> -- M.K. MOHAMED ANSAR (M TECH – Structural Engineering)



It was my delectation to be a part of the team. I gathered a lot of knowledge about Tunnel construction. The escapades we made during the voyage will be in my memory perpetually. Benevolent staff, altruistic friends made the trip more vivid. I love being adventurous. We did never fail to make the trip more adventurous throughout right from the first day to the last, some time we were crazy though. Out of all the memories made river rafting stays close to my heart.

-- MOHAMED ABDUL AZEEM I (M TECH – Structural Engineering)

I am glad that our college arranged a study tour for the students to gain more knowledge practically. The trip was tremendous fun. I love to travel and explore a lot. This trip gave me a chance to witness all. I am little nervous about adventures. But my pals undertook in all adventure. Being nervous and doing an adventurous activity is a mind-blowing experience. I did Paragliding, zip-ling, rode ATV, river rafting too.



-- ARAVIND SAMY A (M TECH - Structural

Engineering)

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