	S J P N Trust's Hirasugar Institute of Technology, Nidasoshi <i>Inculcating Values, Promoting Prosperity</i> Approved by AICTE, Recognized by Govt. of Karnataka and Affiliated to VTU Belagavi. Accredited at 'A' Grade by NAAC Programmes Accredited by NBA: CSE & ECE	Civil Engg. Dept.
		Academic
		Industrial visit report
		2022-23 (Odd Sem)

ACTIVITY REPORT

Sl.no	Title of the Information	Information in brief
1	Activity type	Industrial visit
2	Activity /Event co-ordinators	Prof.Preethi R Patil
3	Date	23-03-2023 TO 25-03-2023
4	Venue	Industry visit @ Dandeli, jogfalls, sighandhur ,murudeshwar,yaana
5	Objectives	<ol style="list-style-type: none"> 1. To understand the working principles of hydro power plant 2. To understand layout and hydropower plants 3. To understand the construction ideas and properties of building materials for extra dosed cable suspension bridge. 4. To understand the properties of rocks and formation of rocks. 5. To understand the mean sea level.
6	Activity outcomes	<p>Gained the civil knowledge of visited each every places.</p> <p>Objectives of the industrial visit is satisfied.</p>
7	Number of participants	16



S J P N Trust's
Hirasugar Institute of Technology, Nidasoshi
Inculcating Values, Promoting Prosperity
Approved by AICTE, Recognized by Govt. of Karnataka and Affiliated to VTU Belagavi.
Accredited at 'A' Grade by NAAC
Programmes Accredited by NBA: CSE & ECE

Civil Engg. Dept.
Academic
Industrial visit report
2022-23 (Odd Sem)

CONTENTS

<u>SL.NO</u>	<u>TOPIC</u>
<u>1</u>	Introduction
<u>2</u>	Dandeli Supa Dam
<u>3</u>	Jogfalls
<u>4</u>	Sigandur extra dozed cable suspension bridge
<u>5</u>	Murudeshwar
<u>6</u>	Yaana caves
<u>7</u>	Summary
<u>8</u>	Conclusion
<u>9</u>	Photo Gallery



1 – Introduction

1.1 - SUPA DAM

At a distance of 1 km from Ganeshgudi Bus Stand and 23 km from Dandeli, Supa Dam, built across River Kali, is situated in Joida taluk of Uttara Kannada district of Karnataka. This is one of the largest dams in the Karnataka and also one of the well-known Dandeli places to visit. This dam is built to manage the water of Kali nadi River to provide irrigation facility to the surrounding area.

The construction of the dam started in 1974 and ended in 1987. The dam was built by Hindustan Steel Works Construction Limited (HSCL) and is now operated by Karnataka Power Corporation Limited. The power house was commissioned in 1985. The name of the dam is derived from Suparulu (God of forests).


1.1.2 – Technical Aspects

The height of the dam is 101 m from foundation level and the length is 332 m. It has a catchment area of 1057 sq. km and 145 TMC live storage capacity. Three radial gates of size 15 x 10 m are provided to regulate the flood discharge. The reservoir has two saddle dams of length 705 m and 940 m. The power house at the foot of the dam has two electricity generators of 50 MW each. They generate about 542 Million Units annually. The electricity generated is supplied to different parts of Karnataka.

Visitors are not allowed near the main dam entrance. On the way to the dam, there is a bridge over Kali River from where one can have a view of the dam and see the water gushing out if the gates are open.



The dam was built by Hindustan Steel Works Construction Limited (HSCL) and is now operated by Karnataka Power Corporation Limited. The power house was commissioned in 1985. The construction

	S J P N Trust's Hirasugar Institute of Technology, Nidasoshi <i>Inculcating Values, Promoting Prosperity</i> Approved by AICTE, Recognized by Govt. of Karnataka and Affiliated to VTU Belagavi. Accredited at 'A' Grade by NAAC Programmes Accredited by NBA: CSE & ECE	Civil Engg. Dept.
		Academic
		Industrial visit report
		2022-23 (Odd Sem)

started in 1974 and ended in 1987. It has a gross storage capacity of 4178 Mcum and a live storage of 4115.25 Mcum of water.

1.2 JOG FALLS

Is a waterfall on the Sharavati river located in the Western Ghats in Shimoga district of Karnataka, India. It is the third highest plunge waterfall in India. It is a segmented waterfall which depends on rain and season to become a plunge waterfall. The falls are major attractions for tourists and is ranked 36th in the list of free-falling waterfalls, 490th in the world by list of waterfalls by total height, 128th in the list of single-drop waterfalls in the World by the waterfall database.

1.2.1-Technical Aspects

The hydro-electric project was conceived by the government of Mysore in mid-1943. A scheme to generate 64,000 horsepower at a cost of ₹358 lakh was designed. The Power House on the right bank of the Gerusoppa dam consists of four Francis-type turbines coupled to the generating units of 60 MW each. The units are configured to operate at a design head of 47.5 mtrs. An outdoor switchyard is located between the toe of the dam and the power house. Power from the outdoor yard is evacuated through a 220 KV double circuit transmission line connected to the state grid at Talaguppa.



The capacity was increased subsequently and currently generates 240 MW of power



1.3 - SIGANDUR

A long-standing demand of the people of Shivamogga district will soon become a reality. By 2024, Sagar taluk will house Karnataka's longest cable-stayed bridge at 2.25 km.

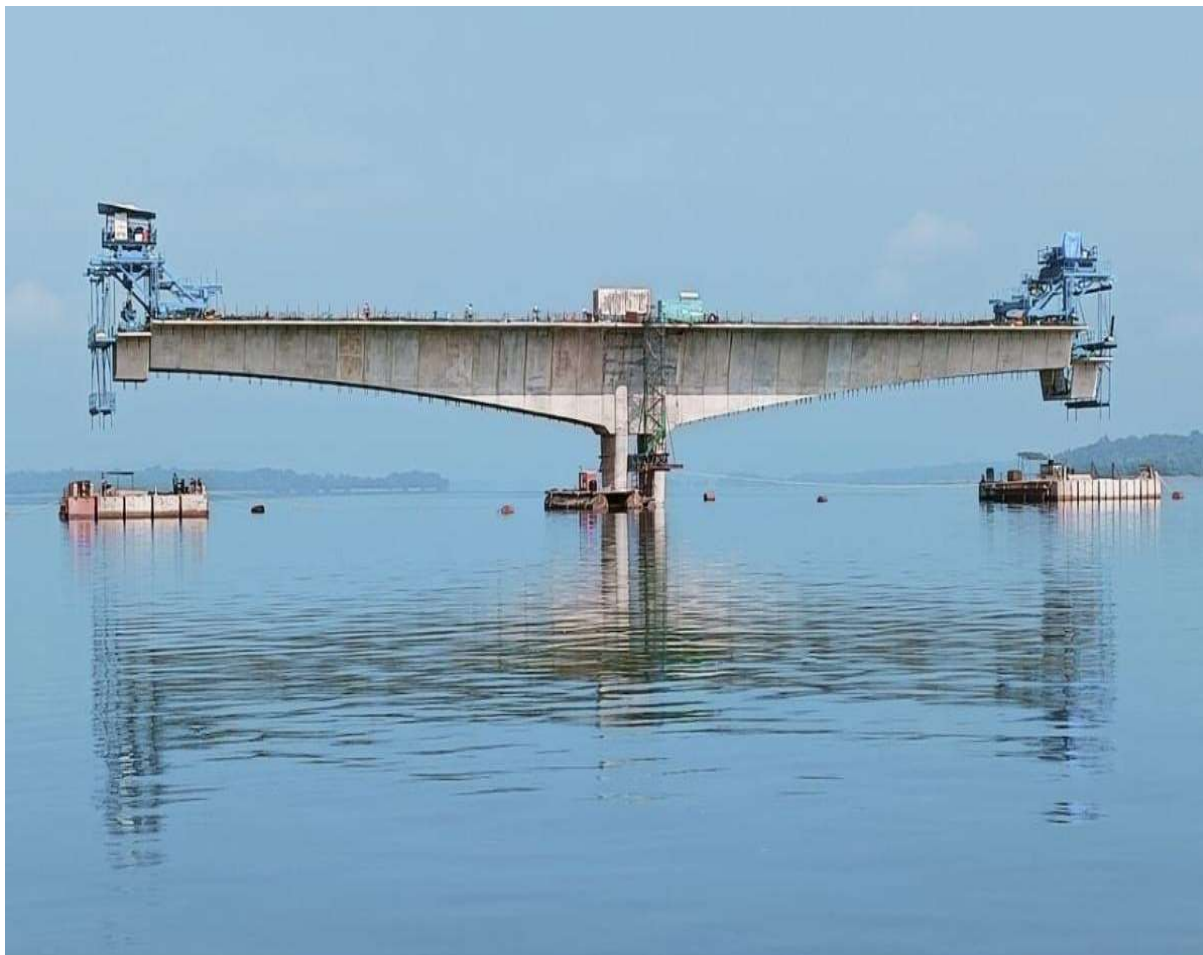
Constructed across the Sharavathi backwaters, the project is estimated to cost Rs 423 crore. Locals had to travel about 80 km by road to reach Sagar town from Sigandur or Tumari region. With the bridge, the distance will be reduced by half.

1.3.1 Technical Aspects


The Bridge In-charge Officer Peer Pasha said, "This will be Karnataka's longest cable-stayed bridge. Also, around 60 per cent of work has been completed." The bridge will be constructed using 17 pillars. A regular bridge would have needed around 100 pillars. "The cable-stayed bridge offers



greater stiffness when compared to a suspension bridge,” he added. This keeps in check deformations on the deck. Explaining the design, he said vertical loads on the deck would be supported by diagonal cable...



Length of the Bridge	2140m
Span Details	3 modules of 220m (65m + 90m + 65m) Balanced Cantilever Bridge + 4 modules of 370 (100m + 170m + 100m) Extradosed span Bridge
Total number of abutments and piers	2 nos abut. + 20 nos pier = 22 nos
Super Structure Depth	4.8m to 3.5m – Extra dosed portion 4.8m to 3.5m – Balanced Cantilever
No. of Piles	1.8m dia – 230 piles

	S J P N Trust's Hirasugar Institute of Technology, Nidasoshi <i>Inculcating Values, Promoting Prosperity</i> Approved by AICTE, Recognized by Govt. of Karnataka and Affiliated to VTU Belagavi. Accredited at 'A' Grade by NAAC Programmes Accredited by NBA: CSE & ECE	Civil Engg. Dept.
		Academic
		Industrial visit report
		2022-23 (Odd Sem)

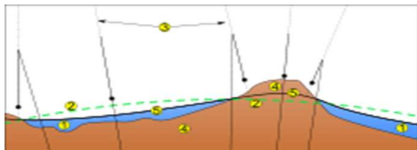
Pile Cap Sizes for Piers	15.8 x 10.1m x 3.0m (10 piles) 15.8m x 11.3 x 3.0m (12 piles) 15.8m x 10.1m x 3.0m (10 piles)
Maximum Depth of Pile	34.038m
Minimum Depth of Pile	21.362m
Average Depth of Pile	29.560m
Nature of Bridge	High Level Bridge
Type of Foundation	Pile Foundation
Type of Bearing	Spherical POT/PTFE
Carriage way	11.00 m (2 Lane)
Grade of concrete	Super structure – M60 Sub structure – M50 Pile – M50
Grade of un tensioned reinforcement	Fe550d
Maximum water Level	555.014m
Cost Per Sqm	1,08,903.00
Estimated Bridge Cost	Rs 33 378.3 Crores

1.4 MURUDESHWAR

The location of Murudeshwar Temple is Kanduka Hill which is surrounded by the Arabian Sea on 3 sides. The total height of Murudeshwar Temple statue of Shiva is 37 metres. The entire temple and its complex, including the 75 metre high Raj Gopura, which offers a breath-taking view of Murudeshwar Shiv Mandir, was built in 2 years. Its construction was funded by businessman and philanthropist Rama Nagappa Shetty. When you are visiting Karnataka, especially the calming hill stations of Karnataka



1.4.1- Technical Aspects




1. Ocean
2. [Reference ellipsoid](#)
3. Local [plumb line](#)
4. [Continent](#)
5. [Geoid](#)

Height above mean sea level is a measure of the vertical distance (height, elevation or altitude) of a location in reference to a historic mean sea level ...

1.5 YAANA CAVES

The gigantic crystalline-like rock formations of Yana stand proud and tall among the evergreen forests of the Western Ghats in Uttara Kannada District. Yana is an ideal destination for pilgrims, trekkers, and nature-lovers alike. A 16km trek through the cool and breezy hills brings you to the foot of the mountain where the rock formations begin. At the top, a stunning sight awaits you: the awesome Bhairaveshwara and Jaganmohini shikharas (or peaks). A cave temple dedicated to Lord

	S J P N Trust's Hirasugar Institute of Technology, Nidasoshi <i>Inculcating Values, Promoting Prosperity</i> Approved by AICTE, Recognized by Govt. of Karnataka and Affiliated to VTU Belagavi. Accredited at 'A' Grade by NAAC Programmes Accredited by NBA: CSE & ECE	Civil Engg. Dept.
		Academic
		Industrial visit report
		2022-23 (Odd Sem)

Shiva lies below these shikharas. The vagaries of time have caused these limestone structures to turn blackish brown and lots of beehives dot the rock surface.

A popular legend associated with Yana holds that Bhasmasura, an evil demon, performed penance to Lord Shiva and obtained the power of reducing to ashes anybody on whose head he placed his hand. An ungrateful Bhasmasura, however, soon decided to test the boon on his benefactor. To escape from him, Lord Shiva came to earth and hid in this place. Lord Vishnu taking the form of a beautiful woman Mohini, challenged the demon to dance and made him touch his own head and thereby reducing him to ashes.

Yana rocks are an adventure seeker's ultimate destination. Yana in Uttara Kannada district attracts trekkers and climbers from all over the world.



1.5.1- Technical Aspects

Geology is a branch of natural science concerned with Earth and other astronomical objects, the rocks of which it is composed, and the processes by which they change over time. Modern geology significantly overlaps all other Earth sciences, including hydrology.

Limestone rocks, a hiking trail, beautiful scenery and lush backdrops compose Yana Rocks, They are home to an epic trail of limestone formations and black karst structures.

The karst rock formations are enveloped by dense forests in the Sahyadri hill range. There are over 60 limestone rock formations in the area of which 2 are notable.

The Bhairaveshwara Shikhara named after Lord Shiva is 390 feet high while the Mohini Shikhara named after Mohini, an avatar of Lord Vishnu is 300 feet tall. Karst refers to soluble rock formations made up of dolomite, limestone and gypsum.



Dandeli supa dam





Dandeli supa Dam





Sigandur extra dozed cable suspension bridge



Sigandur extra dozed cable suspension bridge





Sigh[14]andur extra dozed cable suspension bridge

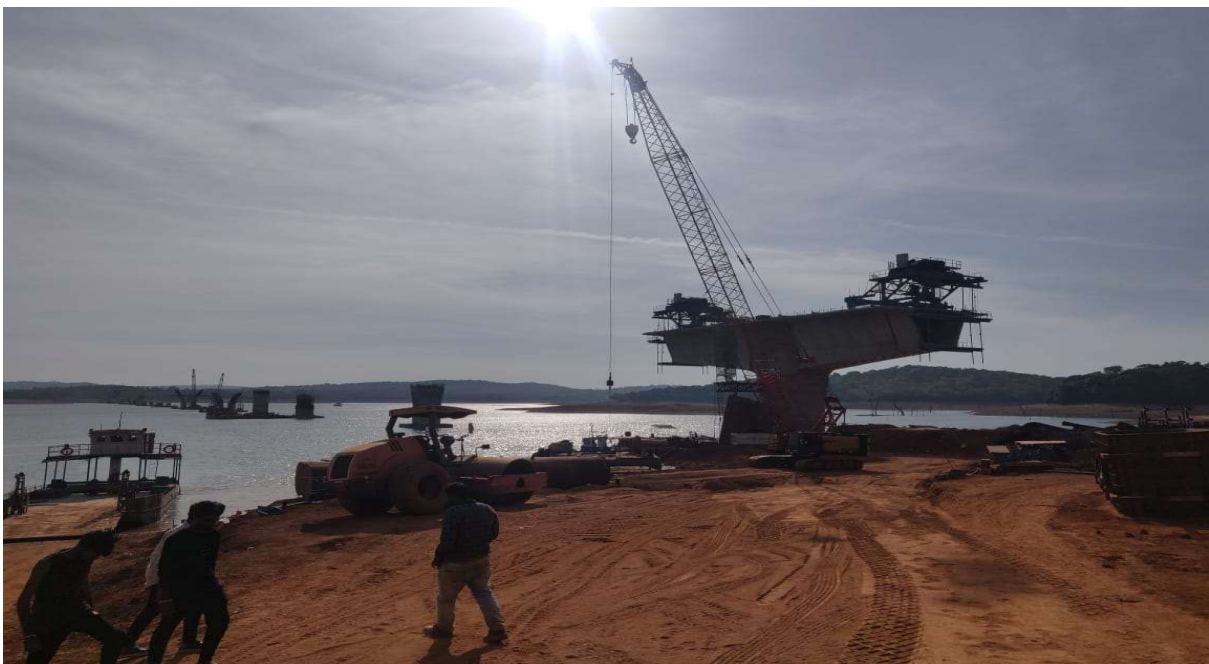




Sigandur extra dozed cable suspension bridge



Sigandur extra dozed cable suspension bridge





MURESHWAR





YAANA





YAANA





S J P N Trust's
Hirasugar Institute of Technology, Nidasoshi
Inculcating Values, Promoting Prosperity
Approved by AICTE, Recognized by Govt. of Karnataka and Affiliated to VTU Belagavi.
Accredited at 'A' Grade by NAAC
Programmes Accredited by NBA: CSE & ECE

Civil Engg. Dept.
Academic
Industrial visit report
2022-23 (Odd Sem)





S J P N Trust's
Hirasugar Institute of Technology, Nidasoshi

Inculcating Values, Promoting Prosperity
Approved by AICTE, Recognized by Govt. of Karnataka and Affiliated to VTU Belagavi.

Accredited at 'A' Grade by NAAC
Programmes Accredited by NBA: CSE & ECE

Civil Engg. Dept.

Academic

Industrial visit
report

2022-23 (Odd Sem)

Conclusion: The activity is organized to fulfill the program outcomes engineering knowledge, problem analysis, design /development solution, conduct investigations of complex problems, modern tool usage, engineering and society, environment and sustainability, ethics, individual & team work, communication, project management & finance and life long learning. Provided into the real working environment, workstation, Plants, assembly lines, machines, systems, and interact with highly trained and experienced personal.

Future Suggestion : visit more Places related to different types of bridges, to study the dynamics of structures.

Co-ordinator

17/10/2023

HOD
Civil Engineering
S.J.P.N.T's HIT, Nidasoshi

PRINCIPAL

Hirasugar Institute of Technology
Nidasoshi- 591 236