



ಹಿರಾಸುಗರ ತಾಂತ್ರಿಕ ಮಹಾವಿದ್ಯಾಲಯ, ನಿದಸೋಸಿ

Hirasugar Institute of Technology

Nidasoshi – 591 236, Karnataka State

Department Of Civil Engineering

Prof. S. M. Chandrakanth M.Tech.
HOD Civil

Phone : 8867814854

Ref. No: HSIT/NDS/CV/2021-22/

Date: 31-01-2022

C I R C U L A R

All the staff and students are hereby informed that Technical visit to Hidakal Dam for Second year Students will be arranged on 14th Feb 2022, So all are requested to be present at 08:30am infront of the Department of Civil Engineering. Attendance is mandatory.

W.D.Tatil

Co-ordinator

07/02/2022
HOD
Civil Engineering
S.J.P.N.T's HIT, Nidasoshi



Ref. No: HIT/CIVIL/03/2021-22

Date: 31/01/2022

To,
The Executive Engineer
K.N.N.L, G.R.B.C.C, Div. No-02
Hidakal Dam,
Tq; Hukkeri, Dist. Belagavi

Sub: Regarding Technical visit to **Hidakal Dam** for Second year Engineering Students,

Dear Sir,

With reference to above cited subject as a part of academic curriculum, the students and faculties of Department of Civil Engineering, S.J.P.N.T's Hirasugar Institute of Technology, Nidasoshi are going to visit your premises.

The students wish to visit the Dam site to understand Civil Engineering Concepts which is the part of their academic curriculum. We will undertake the responsibility of our students, for their behavior, any loss and damage during their visit.

Hence, we kindly request to permit the site visit and also provide valuable technical inputs so that our students can understand and appreciate.

The students (20 No's) and faculties (06 No's) will be visiting the site on 14th Feb, 2022. (i.e., on Monday). The visit will be purely for academic purpose.

Kindly grant the permission for the same and do the needful.

Thanking You,

Yours Sincerely,

M. D. Patil

Coordinator

31/01/2022

H.O.D

HOD

Civil Engineering

S.J.P.N.T's HIT, Nidasoshi



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DEPARTMENT OF CIVIL ENGINEERING

Dept. Civil. Engg.
Activity
Co-curricular
2021-22

Date: 09-02-2022

To,
The Principal,
Hirasugar Institute of Technology,
Nidasoshi.

Sub: Regarding Technical Visit for Civil Engineering students to **Hidakal Dam**.

Respected sir,

With reference to above cited subject, we have planned a technical visit to **Hidakal Dam** for 3rd sem students and it is tentatively scheduled on **14th, Feb 2022** as a part of curriculum.

The students can understand concept of Dams, its parts and working.

Hence, kindly grant the permission and transportation facility for the same.

Thanking You,

Yours sincerely,

N.D. Patil
Co-ordinator

Mr. Kothinwale
Vehicle
incharge
10/2

Informing to
SB Shinde &
Alloted Bus
KAZH
18-25
9/02/2022
H.O.D
Civil Engineering
S.J.P.N.T's HIT, Nidasoshi

Civil Department
Event - Industrial Site Visit
Attendance Sheet

SN	USN	Name of the Student	Name of the Parent	Parent Contact No	Remarks
01.	2HN20CV001	CHETAN.M.A	Mahaveer. A	7996142192	<i>[Signature]</i>
02.	2HN20CV002	NAYANA.B.P	Bharatuh P.	9448420337	<i>N.S. Patil</i>
03.	2HN20CV003	PANKAJ.R.A	Ashok. D	6363778413	<i>[Signature]</i>
04.	2HN20CV004	PRAVEEN.A.D	Ashok D.	6363778413	<i>P.A.S.</i>
05.	2HN20CV005	ROHAN.R.D	Ramesh D.	7829894652	<i>[Signature]</i>
06.	2HN20CV006	RUKSAR.V.J	Vazir. J.	9972637280	<i>P. S. Patil</i>
07.	2HN20CV007	SUNILGOUDA.I.P	Tragouda. P.	9620604093	<i>[Signature]</i>
08.	2HN20CV008	VIJAYAKUMAR.J.I	Tinappa. I	9845268194	<i>[Signature]</i>

Industrial visit coordinators
1. M.D. Patil 2. S.I. Jakati (*[Signature]*)

M.D. Patil
Staff Incharge

[Signature]
H.O.D
HOD
Civil Engineering
S.J.P.N.T's HIT, Nidasoshi

[Signature] 2/22
PRINCIPAL

Date : 14/2/22

Attendance sheet
Civil Department
Event : Industrial site visit .

SN	USN	Name of the Student	Name of the Parent	Parent Contact No	Remarks
01.	2HN20CV001	CHETAN.M.A	Mahaveer . A'	7996142192	
02.	2HN20CV002	NAYANA.B.P	Bharatesh. Patil	94 48420337	
03.	2HN20CV003	PANKAJ.R.A	ABSENT		
04.	2HN20CV004	PRAVEEN.A.D	Ashok. D.	63 63 778913	
05.	2HN20CV005	ROHAN.R.D	RRP	4829894652	
06.	2HN20CV006	RUKSAR.V.J	Mazid. Jambhai	9972637250.	
07.	2HN20CV007	SUNILGOUDA.I.P	Tragouda, Patil	9620604093	
08.	2HN20CV008	VIJAYAKUMAR.J.I	Vijayakumar Inader	9845268194	

M.D.Patil
Staff Incharge

Jinnappa
Inader
H.O.D

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

15/2/22
PRINCIPAL

Total students of civil Dept = 07

Total students of Mech Dept = 10

Civil & Mechanical staff = 05

= 23

14/2/22

14/2/22

ಶ್ರೀ ಸಂಜಯ್ ಸಿದ್ಧಾರ್ಥಿ ಸಹಕರ ಕಾಲೇಜ್ ನಿಯಮಿತ
ಹಿಡಕಲ್ ಡ್ಯಾಂ, ಕಾ. ಮಕ್ಕಲಿ, ಜಿ. ಬೆಳಗಾವಿ

Sangal
Assistant Executive Engineer
KNNL CBC Sub Dn.No.2-
Hidkal Dam.



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Dept. Civil. Engg.

Industrial Visit

Co-Curricular

2021-22

Date of Activity held and Time:	14/02/2022 9.30pm to 5.30pm
Name of Activity	“Industrial visit to Hidakal Dam”
Type of Activity: (cultural/curricular/co-curricular)	Co-curricular
Keynote Address:	Assistant Executive Engineer. Mr. S Kamat Prof. M.D.Patil and Prof.M.M Shivashimpi
Professional Details of keynote speaker:	Assistant Executive Engineer. Mr. S Kamat KNNL CBC Sub Division NO.2 Hidakal Dam.
No. of students:	07
No. of Staff:	02
Activity In charge:	Prof. M.D.Patil and Prof.M.M Shivashimpi
Description of Activity: A “Industrial visit to Hidakal Dam” was organized by Department of Civil Engineering and Department of Mechanical Engineering of the institute, for the 3 rd semester engineering students on 14 th February, 2022 as curricular and co-curricular activity. The event was addressed by Mr. S Kamat Assistant Executive Engineer Irrigation Department Hidakal Dam. The visit was focused on Introducing students to the Various components of the Dam and its working.	



CONTENT

1. Introduction
2. Dam & Reservoir
3. Pictures

Introduction :

Hidakal dam is a multi-purpose dam meant for Flood control, Irrigation, Domestic water Supply & Hydro-power generation. It is built across a Ghataprabha river originating in Amboli. Its Tributaries are Hiranyakeshi, Tamraparni and Markandeya. Its length is 260 km and it joins to Krishna River in Bijapur

HIDAKAL DAM

Dam across river Ghataprabha- Origin- Amboli

Tributaries- Hiranyakeshi, Tamraparni, Markandeya

Length- 260km, joins Krishna River in Bijapur- Rainfall in catchment is 6250mm to 1000mm

Drains 28 TMC of water 50% Dependable yield @ dam site- 85.20 TMC

TOTAL UTILISATION

- a) 84.42 TMC used to irrigate 7.84 Lakh acres through gravity irrigation (canal) including reservoir evaporation.
 - b) 0.392 TMC- Drinking water.
 - c) 3.328 TMC- Used by 3 lift irrigation schemes Kurni- Kochari, Rustumpur, & Kotabagi L,J Scheme
- Total- 85.20 TMC

STAGES OF GHATAPRABHA PROJECT

Stage I)

Ghataprabha left bank canal L=71 km It irrigates 1.2 lack acres Discharge $Q = 42.45 \text{ m}^3/\text{sec}$

Stage II)

Part a) Extension of left bank canal from 72 km to 109 km – 38km irrigates- 2.25 lack acres
(Total 3.45 acres) $Q = 56.6 \text{ m}^3/\text{sec}$

Part b) Construction of Hidakal Dam RL=662.3m in masonry, RL = 663.85m in earthen Live storage capacity = 23.20 TMC

Stage III)

- i) Raising Dam height by 3.70m (12ft) in masonry section to RL=660.0& 4.3m in earthen section to RL= 668.1m with FRL/MWL-662.95m Storage capacity = 51 TMC Storage feeds Ghataprabha left bank canal, Right bank canal & chikodi branch canal, L
- ii) Construction of Right bank canal and chikodi branch canal irrigates 384000 acres
- iii) Lining of left bank canal with discharge = $0.56 \text{ m}^3/\text{sec}$ to increase discharge and minimise seepage loss so additional area irrigated 54997 acres



SALIENT FEATURES OF HIDKAL DAM

SL. NO	ITEMS	STAGE –I & II
A. General		
1	Location of Dam	Hidkal village of Hukkeri taluk of Belagavi district at: Latitude 16° 09' N Longitude 74° - 38' E
2	Means of Access	7..0 k.m from Pachapur Railway Sta- tion of Pachapur – Miraj Hubli sec- tion South western Central Rail- way
B. Geophysical Features		
1	Catchment area	1412.00 Sq.km (545.00 Sq.miles)
2	Nature of catchment	The Uppermost reaches are in hilly and forest area, while the lower reaches are in moderate country. It has many tributaries
3	Climate	Moderate.
4	Annual mean temperature	Max Temperature: 105° F Min Temperature: 45° F Normal Temperature: 85° F
5	Mean annual precipitation	Verifying from about 250 inches at the source to the river to about 25 inches at the dam site.
6	Net yield Dam site at 75 % dependability	2412 MCM { 85.20 TMC }
7	Silt charge per year	1.00 Acre ft/sq.mile
8	Geological features at dam site	Hard quartzite rock (Coarse-grained) exposed at bed and quartzite's in the flanks
C. Technical Details of Dam		
1	Gross Storage Capacity	1444.32 MCM (51.00 TMC)
2	Dead Storage	0.06 Tm.cum (2.02 TMC)
3	Lowest Foundation Level (El.)	605.62 m (1986.94 ft)
4	Lowest River Bed Level (El.)	614.17 m (2015ft)
4.a	Sill of River Sluice (El.)	--



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Industrial Visit

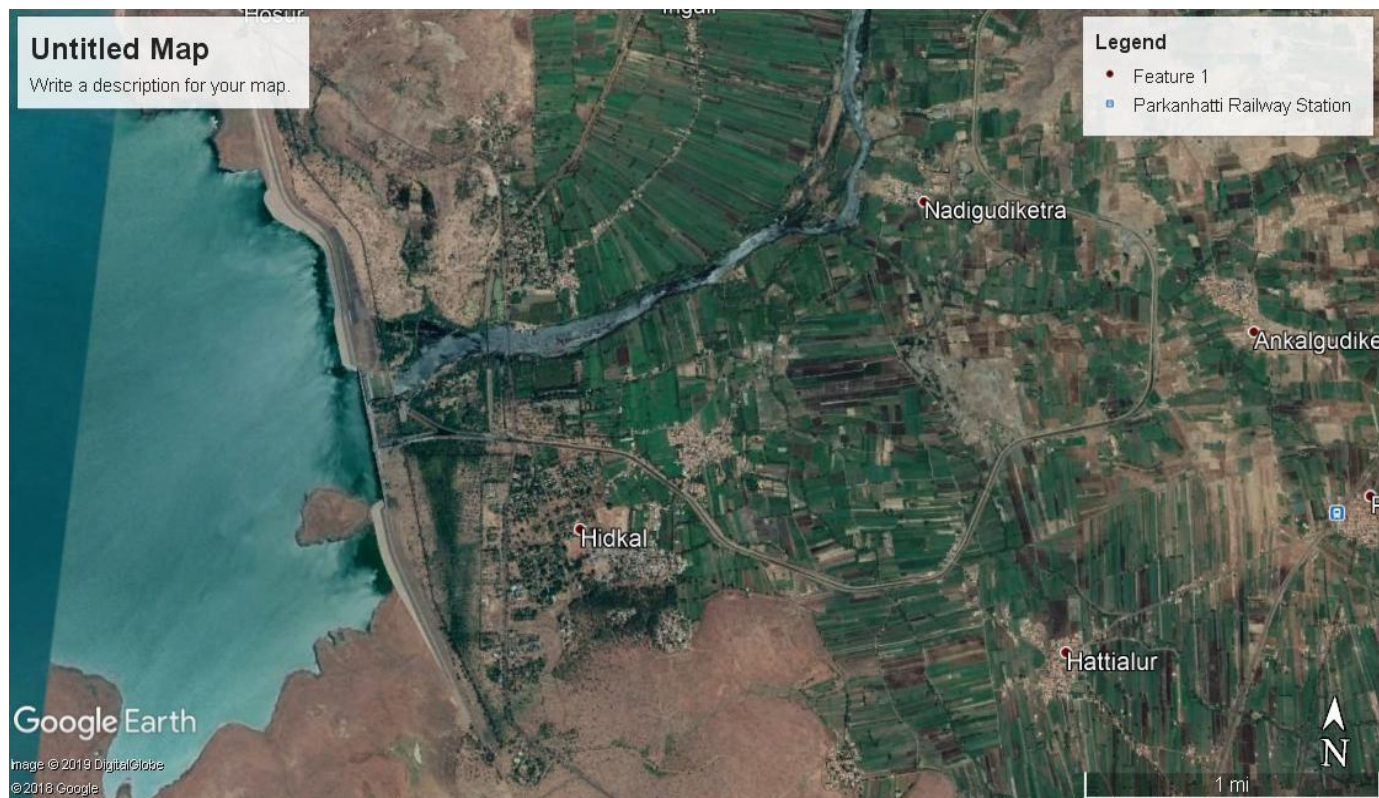
Co-Curricular

2021-22

4.b	Sill of Irrigation Sluice (El.)	629.11 m (2064.00 ft)
5	(El.) Dead Storage Level at MDDL	633.37 m (2078.00 ft)
6	Full Reservoir Level (FRL) (El.)	662.95 m (2175.00 ft)
7	(El.) Maximum Water Level (MWL)	662.95 m (2175.00 ft)
8	Spillway Crest level (El.)	655.32 m (2150.00 ft)
9	Top Level of Dam (El.)	668.12 m (2192.00 ft) Earthen Dam 665.98 m (2185.00 ft) Masonry Dam Non-overflow section and Spillway Portion
10	Maximum area of water spread	171Sq.Km
D. Length of Dam		
11	Main Dam (Total Length)	4481.00 m
a.	Left Bank Earth Dam	1463.04 m
b.	Rock fill Dam	365.76 m
c.	Earthen Dam in Gorge Portion	457.20 m
d.	Masonry spill way Dam	149.35 m
e.	Masonry Non spillway Dam	612.65 m
f.	Right Bank Canal Dam	1433.00 m
E. Other		
12	Maximum height of dam above the lowest foundation level	62.48 m
13	Height of dam above the lowest River Bed Level	53.35 m
Sl. No	Items	Stage -I & II
14	Top width of dam	5.5 M
15	Designed flood intensity	4616.16 Cumecs (1,63,000 cusecs)
16	No. & size of spillway crest gates	10 Nos. of 12.90 M x 7.62 M gates – Radial Type
17	gates No. and dimensions of river sluice	Not Provided
18	No. and dimensions of irrigation sluice gates	6 Nos. of 1.83 m x 3.65 m In block (Ch 2682 m) (8800 ft)
F. Details of submergence		
1	Total area of submergence (Gross)	7891 Ha (19500Acres)
2	Villages submerge	22 Nos
3	Population affected	15,660 (Approx.)
4	Road line	National NH4 (Pune to Bengaluru Road)



VARIOUS PICTURES OF DAM



Picture of Dam site



Picture of Dam spillway



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Co-Curricular

2021-22



Picture of the students and staff at Dam site



Picture of the students and staff near Power plant



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Industrial Visit

Co-Curricular

2021-22



Office of Executive Engineer



Picture of Canal



Picture of Ogee spillway



Picture of Water Discharge From the Dam to Canal



Picture of Water Discharge From the Dam to Canal

CONCLUSION

The dam visit gave students the first hand experience of the mega-structures such as dam & its reservoir. They got the knowledge **about the purpose of the dam, design parameters like geology of the site, topography, capacity, size, shape, material, layout, life, cost, etc. The various components of the dam such as, dam, spillways, gates, galleries, canals, Instrumentation, Power generation plant, etc .Also the reservoir, embankments, dykes its catchment could be seen. Working of these components was understood .Also the students got the briefing about the service of these structures for the development of area and country.**

M.D. Patil
Coordinator

[Signature]
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S.J.P.N.T's HIT, Nidasoshi

[Signature] 15/2/22
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