

# Effect of Geopathic Stress on Strength of RCC Structures

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**Abstract-** This paper deals with the experimental study of Effect of Geopathic Stress on Strength of RCC Structures . Geopathic Stress can be detected by various dowsing techniques and its intensity could be measured by an instrument called "NAAV meter". Geopathic Stress is related to underground flowing water emitting electromagnetic radiations which are harmful for human beings residing in that stress zone and might be for structures also, which is prime part of our investigation under paper title "EFFECT OF GEOPATHIC STRESS ON STRENGTH OF RCC STRUCTURES". It has been found that Geopathic Stress affects the properties of soil like moisture content, specific gravity, plastic limit, liquid limit and density. We have also casted concrete blocks of M20, M25 and M30 grade and tested for strength for 7, 14 and 28 days and the results were found that concrete blocks casted in Geopathic Stress Zone gives less strength as compared to Non-Geopathic Stress Zone.

In this study Geopathic stress effects on columns and beams are studied for existing building. The comparative analysis is made using FEA tool ANSYS for various case studies. The Geopathic stresses are found out by dowsing and NAAV meter.

**Keywords-** Geopathic Stress, Non Geopathic Stress, Naav Meter, Beam-Column Frame.

## I. INTRODUCTION

The word 'Geopathic' is derived from two Greek words: geo, meaning 'of the earth' and pathos, meaning 'suffering' or 'disease'. The literal meaning of the word geopathic is suffering or disease from the earth. Geopathic stress is the general term used for energies emanating from the earth which may cause ill health in human beings.

In case of running water, normally 200-300 ft (60-90 meters) underground, an electromagnetic field is created in opposite direction to its flow by friction which then creates strong unhealthy vibration. The effect of these higher vibrations has been called by many names such as black streams, cancer rays, negative green rays, Hartmann and Curry

line and even ley lines. However, over the years now it is called Geopathic Stress (GS).

The earth has a natural magnetic field. As the earth rotates, it acts as if it has a big magnet at its centre, creating electric currents in the molten metals found within the earth's core. Through this activity, a magnetic field is produced. Human beings, animals and plants have evolved and are accustomed to living with this magnetic field as a backdrop. Indeed, it is thought that many mammals and animals use the energy of the magnetic field for migration and navigation purposes. The magnetic field is dynamic, constantly changing with the natural variations of the earth's rotation, i.e. the seasons and weather conditions. Electromagnetic radiation is also part of man's environment. The electromagnetic spectrum is vast and includes sunlight, radiowaves and microwaves.

Geopathic and electromagnetic energies cannot be seen and, as yet, their effects on humans are not adequately explained in scientific terms. There is little doubt about the positive effects that electromagnetic radiation has had on human health. We know, for example, that a major benefit of sunlight is photosynthesis; it assists in the production of vitamin D and without electromagnetic radiation we would not have the benefit of x-rays and electricity. However, these energies can also have a detrimental effect on our health. As "they hold no boundaries, they can pass through windows, doors, walls and body tissues". The risks from overexposure to x-rays and sunlight are now well known and individuals are advised on protective measures. However, it is not just sunlight and x-rays that can cause deterioration in health. The human body can act as a receiver for electromagnetic waves. Amidst much skepticism and debate, research studies have demonstrated that constant exposure to electrical emissions has a negative effect on human health. It has been reported that living close to power lines can cause or exacerbate headaches, depression, allergies, anxiety, irritability and may even lead to fetal difficulties, increased tumor growth or cancer (National Radiological Protection Board 1992). Electricity that has such a negative effect on the body is referred to as electromagnetic pollution. Electromagnetic pollution does not just come from living close to power lines; the average person is exposed to this type of pollution every

day through television sets, microwaves and computers. When the body is already stressed by the effects of electromagnetic pollution, it is also more susceptible to geopathic stress. Geopathic stress occurs as a result of disturbances in the earth's magnetic field. These can occur either through natural disturbances such as geological faults and underground water, or through manmade disturbances.

Examples of man-made disturbances include underground transport systems, mining, public utilities and ley lines. Ley lines are usually recognized as a man-made phenomenon. Ley lines occur where sacred stones (stones that have been energetically charged) are laid in a straight line. Like electromagnetic pollution, there is much skepticism from the scientists as to whether or not geopathic stress actually causes illness. However, it is thought that it can undermine the body's natural defences. The body is affected both through its subtle energy system and its own electrical system.



**Figure 1.1:** Shows stem of a tree, growing in the Garden of Schonbrum Castle in Vienna, Austria

## II. NEED OF INVESTIGATION

Till day there is no authentic process of the finding out the effect of geopathic stress on strength of concrete structures. It is hence necessary to scientifically study the nature of the Geopathic stress and its ill effects on Structural elements.

It has been found that Geopathic Stress affects the properties of soil like moisture content, specific gravity, plastic limit, liquid limit and density.

In my BE Project, we have casted concrete blocks of M20, M25 and M30 grade and tested for strength for 7, 14 and 28 days. We have found that concrete blocks casted in Geopathic Stress Zone gives less strength as compared to Non-Geopathic Stress Zone over the period of time.

Reference of this work is paper published in **IJSR, Volume 7, Issue 2, February 2018.**

**Paper link:** [https://www.ijser.net/archive/v7i2/v7i2\\_01.php](https://www.ijser.net/archive/v7i2/v7i2_01.php)

Hence, to extend further scope need for investigation for Geopathic Stress zone for existing structure is required and in this current paper, we have tried to investigate under the topic “EFFECT OF GEOPATHIC STRESS ON STRENGTH OF RCC STRUCTURE”

## III. OBJECTIVE OF PRESENT STUDY

The aim of this study is to find out the Effect of the Geopathic stress on Concrete by proper characterization of nature of Geopathic stress. Following are the research objectives;

- To study the characteristics of Geopathic stress in Built Environment.
- To relate the effect of ground water vein as Geopathic stress form nadir direction in Built Environment.
- To define the unit for Geopathic stress.
- To follow proper dowsing technique for tracing out the exact location of Geopathic Stress and Non Geopathic Stress.
- To study the effect of Geopathic Stress on Strength of different concrete structures like any type of building, bridge structure, fly-over etc by finding it's present strength by using NDT test method and then analysing it for Geopathic Stress.
- To apply geopathic stress in existing beam column framing in ANSYS and check effect for incremental load up to failure
- To compare beam column framing of exact geopathic stress location and without location.

## IV. RESULT AND DISCUSSION

- Name of site: Shivsai developers
- Name of builder : Kiran Vitthal Nagawade
- Location of site : Plot no. 25&26 at AKURDI
- Area of site : 6000 sq.ft
- Name of consultant : Mahesh Kadam
- Present condition : BUILDING IS 4 YEARS OLD AND USED COMMERCIALY
- Total built up area : 4800 per floor slab area ( P+4)



Figure 1.2: Elevation plan

V. DETAIL OF DRAWINGS

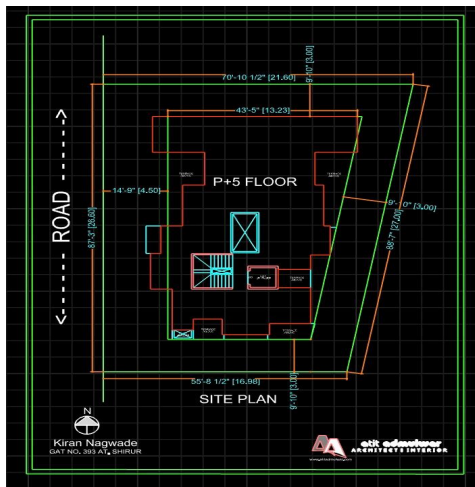


Figure 1.3: Site plan

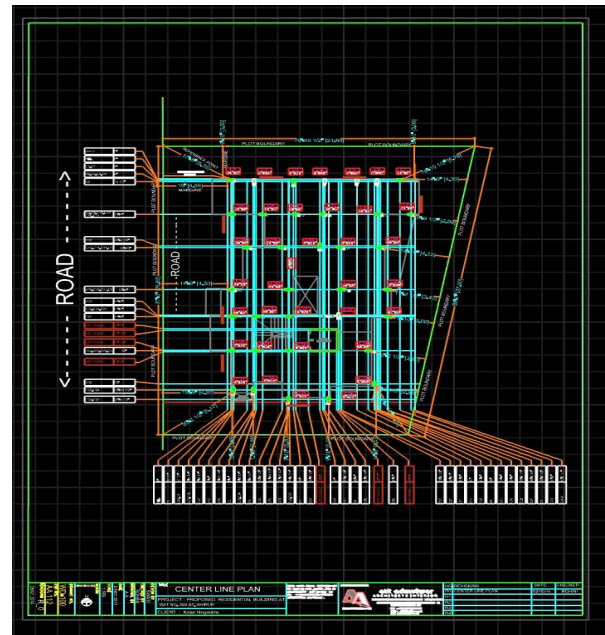


Figure 1.5: Centre line plan

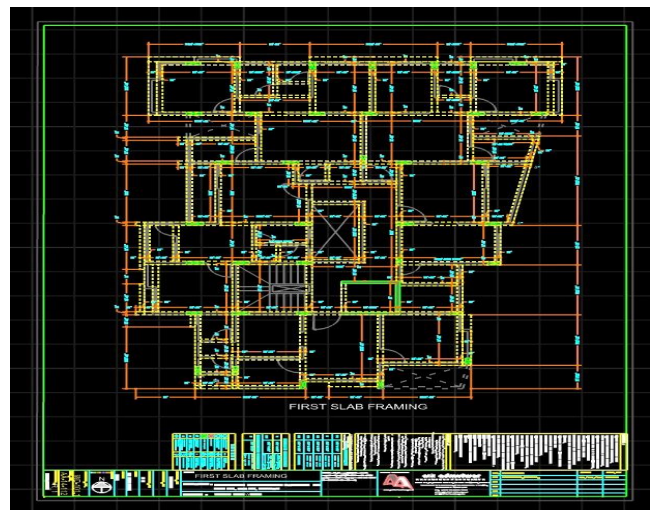


Figure 1.6: First slab framing

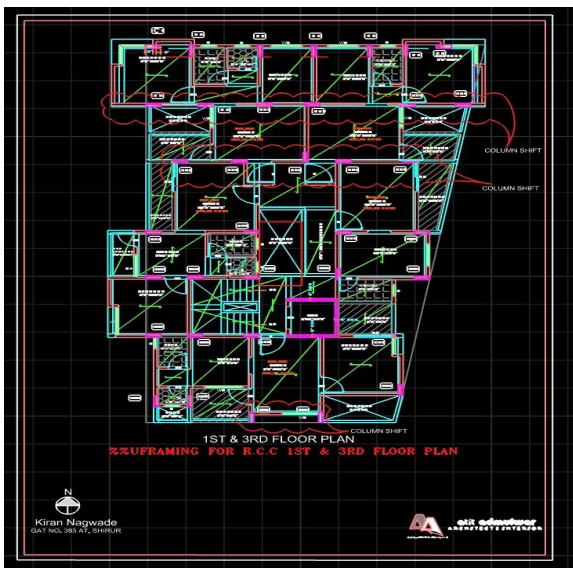


Figure 1.4: First and third floor plan

Column No	SIZE	MAIN BARS	RINGS
C1	9"x15"(230x380)	4-12mm+2-16mm	6mm@150 mmc/c
C2	9"x15"(230x380)	4-12mm+2-16mm	6mm@150 mmc/c

Table1.1 : Column Size and Reinforcement details

BEAM NO	SIZ E	TOP	BOTTO M	EXTRA TOP	STIRR-UPS
PB1	230x380	2-12mm	2-10+2-12	2-12mm	8mm@150c

Table1.2 : Beam Size and Reinforcement



Figure 1.7: L-rod deflecting in Geopathic Stress zone

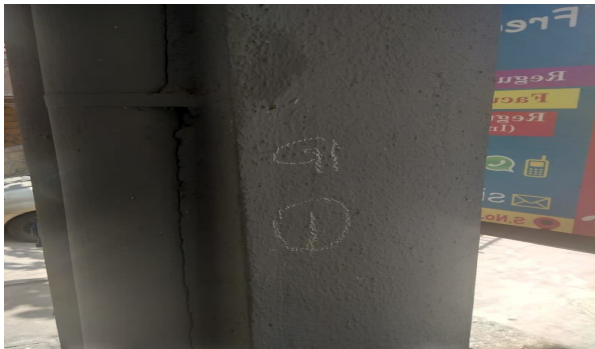


Figure 1.8: Column tested for Geopathic Stress



Figure 1.9 : NAAV meter kept in place of Geopathic Stress

VI. ANSYS MODELING

Results of Rebound Hammer test conducted on Column-Beam Frame on Geopathic Stress and Non-Geopathic Stress Zone.

Zones	Compressive Strength
Geopathic Stress	30 MPa
Non-Geopathic Stress	28.6 MPa

These Compressive Strength Results are applied in Ansys Column-Beam Model prepared for Geopathic Stress and Non-Geopathic Stress:

MODEL NO.1	BEAM COLUMN WITOUT G.S.
MODEL NO.2	BEAM COLUMN WITH G.S.

Table 1.3

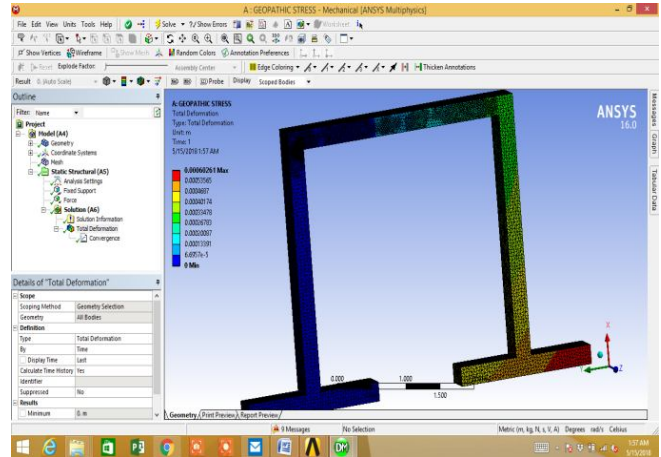


Figure 1.10: Frame in Geopathic Stress (Model 2)

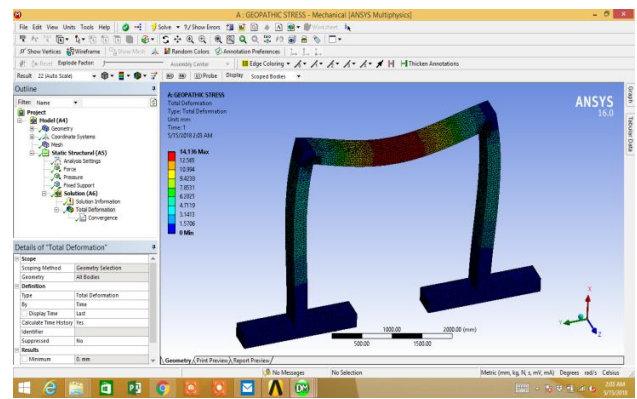


Figure 1.11: Total deformation in Geopathic Stress (Model 2)

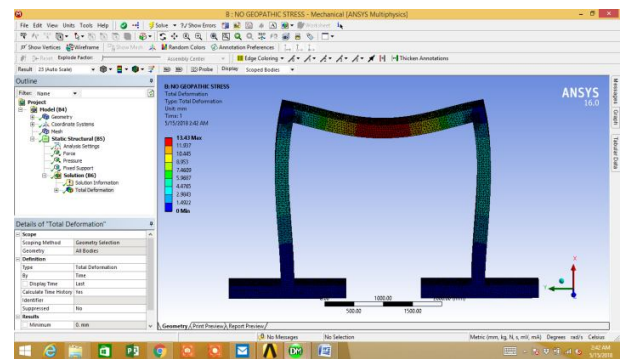


Figure 1.12: Equivalent Stress in Non-Geopathic Stress

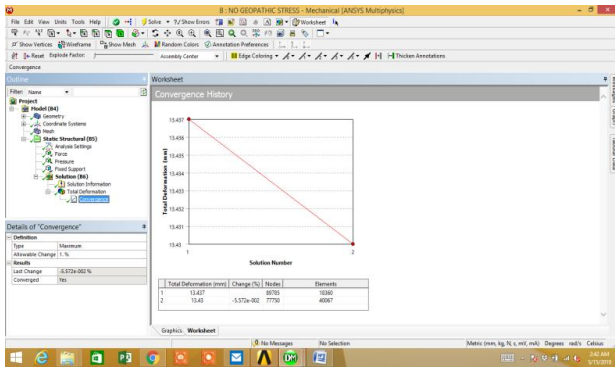


Figure 1.13: Maximum Stress in Model 1

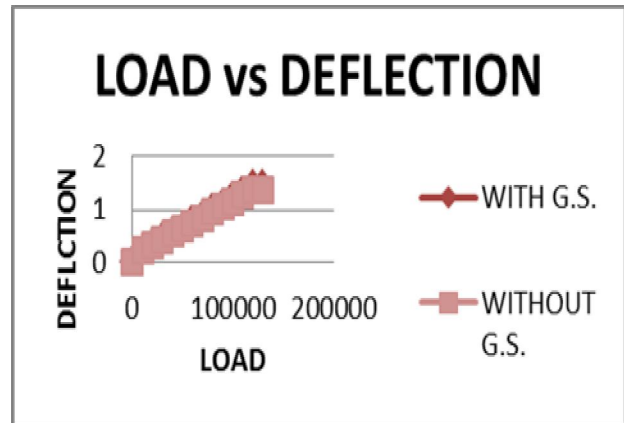


Figure 1.15: Load Vs Deflection Graph

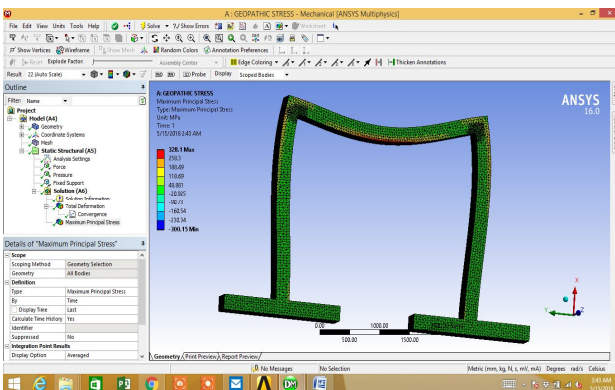


Figure 1.14: Maximum Principal Stress Frame in Geopathic Stress (Model 2)

VII. CONCLUSION

The present study emphasis on finding geopathic stresses on structural element using L-rods dowsing technique and obtaining compressive strength using rebound hammer test. The further analysis is done using FEM tools for identifying effect of geopathic stress on existing structure. The following conclusions can be made using present study.

- The normal stress, bending stress and maximum principal stress observed 5-10% more in the geopathic stress model
- After applying incremental load, the deflection observed 7-8% more in geopathic stress model.
- Therefore it can be concluded that consultant may need to consider geopathic stresses while designing structural element near water table which contains geopathic stress

Also, in case study building considered here is 4 years old, so the percent decrease in Compressive strength is 4.6 %.

Suppose, we consider 50 years life of building taking 4.6% decrease in Compressive strength for 4 years then for 50 years, the decrease in Compressive strength could be 57.5% Hence Geopathic Stress could be one of the parameter for reduction in Compressive Strength.

VIII. FUTURE SCOPE

Effect of Geopathic Stress can also be tested on Bricks, Beams, Columns and other structural elements and on humans also.

LOAD	With Geopathic Stress	Without Geopathic Stress
0	0	0
10000	0.22277	0.2094038
20000	0.33416	0.3141104
30000	0.44555	0.418817
40000	0.55693	0.5235142
50000	0.66832	0.6282208
60000	0.77971	0.7329274
70000	0.89109	0.8376246
80000	1.0025	0.94235
90000	1.1139	1.047066
1.00E+05	1.2253	1.151782
1.10E+05	1.3366	1.256404
1.20E+05	1.448	1.36112
1.30E+05	1.448	1.36112

Table 1.4: Variation in Stress in Geopathic and Non-Geopathic Stress zone

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