

EFFECT OF GEOPATHIC STRESS ON BITUMINOUS PAVEMENT

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Abstract: This paper basically for the investigation of Geopathic Stress Zones along the road. Geopathic stress is detrimental energy emanating from the earth and leading to long-term harm to susceptible humans, animals and plants which are exposed to them in their environment. Detection of geopathic location has been done by Experimental investigations on road alignment of one KM, by performing distresses survey, dowsing and by magnetic field detector to investigate the Geopathic Stress. Due to such energies emitted by the earth distresses may occurs on road pavements. It is found that, where geopathic stress occurs a copper L rod gets deflected, also get abrupt changes in magnetic field where the distresses occurs.

Keywords: Bituminous Pavement distresses, Geopathic Stress, Dowsing, and magnetic field detector.

I INTRODUCTION

The word Geopathic is derived from two Greek words: “geo” means “of the earth” and “pathos” means “suffering” or “disease”. The word “geopathic” literally means suffering or disease of the earth.

Energies from earth at specific locations which are have an ability or power to change the function of normal body which working, are often known as negative energies.

Geopathic stress is detrimental energy emanating from the earth and leading to long-term harm to susceptible humans, animals and plants which are exposed to them in their environment.

Geopathic Stress is the Earths vibrations which rise up through the Earth and are distorted by weak electromagnetic fields created by subterranean running water, certain mineral concentrations, fault lines and underground cavities. The vibration distorted becomes abnormally high and harmful to living organisms.

The reasons for GS are disturbances caused not only by underground water (either flowing or stagnant), but also natural calamities like earth quakes, geological structures such as ore deposits and man-made structures such as mining or large buildings, foundations, sewage and water pipes, underground transport systems. These things create harmful radiations and generate heat which affects the person’s health that sleeps on GS. The electro-magnetic pollution in the form of overhead or underground cables, phone masts and electricity generating stations or sub-stations also has a harmful impact on human body and mind.

The earth has a natural magnetic field; it acts as though it has a large magnet at its center. The rotation of the earth creates electric currents in the molten metal’s found within the earth’s core, thereby producing a magnetic field. Geopathic stress occurs when the earth’s magnetic field is disturbed, either naturally or artificially, and the background field we normally experience is changed. Natural disturbances to the earth’s magnetic field include geological faults, underground ore masses and underground water, particularly running water. Earthquakes and running underground water can slowly erode rock and have a destabilizing effect. Gordon says: “Natural radiation which rise up through the earth are distorted by weak electromagnetic fields created by subterranean running water, create mineral concentrations, fault lines and underground cavities. The wavelength of the natural radiation disturbed in this way becomes harmful to living organisms.” Man-made disturbances in the earth’s magnetic field include mining, foundations for tall buildings, underground transport systems and public utilities (sewage, water and so on).

II EFFECT OF GEOPATHIC STRESS

2.1 Human health.

German scientist and a talented dowser, who published a book called “Earth Currents-causative factor of cancer and other diseases” has concluded that 2.5% of the earth’s surface is affected by geopathic stresses i.e. illness causing stresses from the earth. Tromp (1949) hypothesized that the human system passing at high speeds through a field would undergo changes on approaching conductor such as a groundwater stream of water and the body skin potential will decrease. He postulated that the relative conductivity of soil and the groundwater stream, along with the speed of movement, conductivity of the atmosphere would affect initial skin resistance. This hypothesis is of specific importance as it relates to the movement of human system with speed over underground water veins. This may throw more light on the aspect of accidents on mysterious spots on highways.

Following Symptoms may be associated with the Geopathic Stress

Headaches, sinus ache, Depressed, anxious/nervy, no zest for life, Irritable, short fuse, Poor appetite, food problems, allergies, Often get static shocks, Insomnia, restless, wake up feeling tired, Vivid dreams, nightmares, Muzzy headed memory loss, Feel the cold especially hands & feet, the baby continually cry or infants wet bed, sleep walk ,Ear problems, tinnitus
Research shows that chronic disease like arthritis, cancer is associated with Geopathic stress.

2.2 Plants and Animals

Cats, Ants, Bees, Fungi, Bacteria attracted to negative energies, as shown in fig.1.



Fig.1

fig.2

Above in figure 2 these animals sleep in good energy places.

Trees are not properly grown up in stress zones. Trees may bend leaves to save from the negative energies.

2.3 Road Accidents

During the detail investigation of whether the Geopathic Stress is a major cause of road accidents

At typical black spots, S.S.Pimplikar (2010) observed that severe pavement distresses were visible at the accident locations, particularly even in newly constructed pavements.

These included both the pavement type’s i.e. concrete pavements and Bituminous Pavements

Bradna (2002), based on a research examining the causes of traffic accidents in relation to groundwater zones carried out in western Europe and in the Czeck. Republic has summed up in his work “The Influence of Hydro pathogenic zones on Drivers”.

The work is based on long-term statistics of accidents in concrete localities

The inferences are that the frequency of sensitive drivers reacting strongly to the influence of the ground waters, geological faults and mineral ore veins range from 15 to 20%. This has been one of the causes of accidents accepted in foreign countries.

III GEOPATHIC STRESS AND ROAD ENVIRONMENT

The Chinese termed geopathically stressed areas as “dragon lines”, 4000 years ago. Von Pohl (1929), a German scientist and a talented dowser, who published a book called “Earth Currents-causative factor of cancer and other diseases” has concluded that 2.5% of the earth’s surface is affected by geopathic stresses i.e. illness causing stresses from the earth.

Mag (1995) has reported existence of spiraling energy at the crossing of underground water veins. He further reports that trees which receive this corkscrew energy have exhibited un-natural growth. Assa (2004) has attributed that the intersection of water veins may be either “Yang” with a charging energy or “yin” with a discharging energy. “Yang” causes cell enlargement and cell proliferation whereas “yin” causes inflammation and immune problems. At the particle physics level, all objects, animate or in animate are ultimately photoning.

Road infrastructure is very important for any country. Expressways and highways are assets. User safety and economy are fundamental to any transportation planning process. The fatality rate in the country needs to be reduced. In the planning process the location aspect of the roads has been given significant importance. However, the effect of the earth radiations arising from the nadir direction has not been adequately considered. This has resulted in attributing the cause of accidents occurring at typical locations, where engineering parameters normally considered do not exist, as mysterious or unknown.

The effect of the earth radiations on the human being as well as the pavement surface needs to be carefully determined in the early planning phase of any transportation system. This will enable to identify a few feasible alternatives, and then select the best one.

Geopathic stress should be considered as an additional design parameter. Professional bodies like the Indian Road’s Congress (IRC) should investigate into this aspect. Empirical evidence of severe distresses in pavements on geopathically stressed locations has opened up an emerging area of research; the structural evaluation of distresses at accident spots. Whether the distresses themselves significantly contribute in causing the accidents may be a further area of investigation.

IV PAVEMENT DISTRESSES

Now a day’s government authority consider as assets to the pavements. Because of large investments is made for pavements. Also that investment is for long term. Generally the

Pavements fails to give the service to its lifespan of pavement, one of the reason is due to distresses in pavements.

There are two types of pavements as Flexible pavements and rigid pavements.

The discussions of problems related to pavement distress are generally based on whether the pavement has a concrete or bituminous surface type. Common distresses are identified from this literature as Longitudinal cracking, corner cracks, spalling, Pot holes, surface deteriorations, map cracking, transverse cracks etc. Some of the distresses photographs shown in Fig. 3 to Fig. 8.as map cracking (Fig.3, &6), spalling of agg. (Fig. 5), edge crack (Fig.7), surface deterioration (Fig.8).



Fig.3 Map cracking



fig.4 Edge crack



fig.5 Spalling of Agg.



Fig.6 Map Cracking



Fig.7 Edge crack



fig.8 surface deterioration

V NEED FOR THE STUDY

After carefully going through above reasons a curious question therefore arises that does the Geopathic stress affect the pavement Materials and cause them to deteriorate?

VI OBJECTIVES

To detect the geopathic stress zone along the road. Study the geopathic stress affects on pavements or not? Also to find, is there any relation of geopathic stress and distresses in bituminous pavements.

VII METHODOLOGY

7.1 Distresses in pavements

Along with above all possible distresses that occur on pavements, GEOPATHIC STRESS also affect on the pavements is the aim of study of the project.

1. One KM of MDR has been selected which represent the bituminous pavement type.

Section of road which is selected which exhibited severe distresses were visually observed at 50m changes recorded and pavement condition rating is done.

After preparation of survey as per 50 m interval chainage, locating the spots or chainage that having the low, moderate and high distresses. **Severity:** 1 – Low 2 – Moderate 3 – High.

As a very general rule, if the condition rating is between 80 and 100, normal maintenance operations such as crack sealing (CRS-2, AC3), pothole repair, or perhaps surface treatment (eg. Fog seal using CSS-1, SS-1, etc.) are usually all that is required. If the condition rating falls below 80, it is likely that an overlay will be necessary. In this event, it may be advisable to contact the Minnesota Asphalt Pavement Association or other qualified engineering personnel for assistance. If the condition rating is below 30, chances are that major reconstruction is necessary

All the observations are recorded in the **Distress Severity rating form shown in below table.**

Table 1

Distress Severity Rating Form

OBSERVATIONS CHAINAGE IN M	LONGITUDINAL CRACKING			EDGE CRACKS			SPALLING			POT HOLES			SURFACE DETRIORATION			CONDITION			MAP CRACKING			TRANSVERS E			Severity/ Remark
	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	
0 TO 50 M	1				2		1			1			1				2			2		1			1
51 TO 100 M	1				2		1				2			2			2		1			1			2
101 TO 150 M	1			1			1				2				3		2			2		1			2
151 TO 200 M	1				2			2		1			1			2			2		1				2
201 TO 250 M	1				2			2			2			2			2		1			1			2
251 TO 300 M	1				2				3		2			3		2				3	1				2
301 TO 350 M	1				2				3		2			2		1				2		1			2
351 TO 400 M	1				2		1			1			1			1			1		1				1
401 TO 450 M	1			1			1			1			1			1				2		1			1vgood
451 TO 500	1				2		1			1			1			1			1		1				1good
501 TO 550 M	1			1			1			1			1			1			1		1				1good
551 TO 600 M	1			1			1			1			1			1			1		1				1vgood
601 TO 650 M	1				2			2			2			2			2			2		1			2
651 TO 700 M		2			2		1				2			2		1			1		1				2good
701 TO 750 M	1					3			3			3			3		2			2		1			3
751 TO 800 M	1					3	1			1			1			1			1		1				2
801 TO 850 M	1				2		1				2			1			1			1			2		2
851 TO 900 M	1				2			2			2		1			1			1		1				2
901 TO 950 M	1			1				2			2			2		1			1		1				1
951 TO 1000 M	1				2			2			2			2			2		1		1				2

From above observations & by photographic rating as per standard rating manual, condition rating is 63.4.

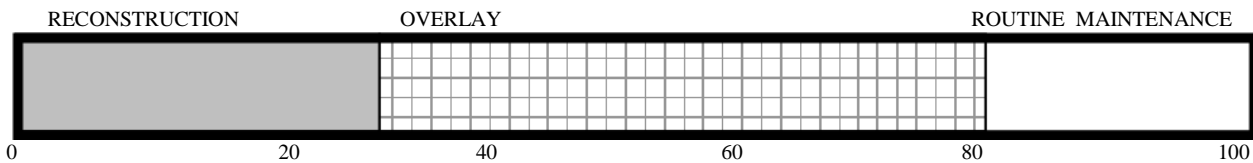


Fig9. Condition Rating as a General Indicator of Type of Maintenance.

From figure9, it is likely that an **overlay** will be necessary.

7.2 Dowsing Method-

DOWSING is the art of locating energies or energetic changes which are not accessible through our usual senses. A dowser often uses a tool or instrument to help him indicate subtle changes in space, on a property or with people.

This technique has been using survived for more than a thousand years. The practice is not restricted to any specific work area. Through the world people use it for finding ground water.

In England British society of Dowser has been established in 1993. Similarly in 1961

The American society of Dowser has been established. Both these society's present journals have information on various aspects of Dowsing. Dowsing has used for locating ground water, underground tunnels and also used in medicine field. Photographs are given below about Dowsing in Fig.10 to 13.



Fig.10

L -COPPER RODS



fig.11

L- COPPER RODS IN STRAIGHT



fig.12

L- RODS IN SWINGS



fig.13

L- RODS TURNS IN CROSS NEAR TREE

L –rods are the copper rods of ‘L ‘Shape is used to detect the ground water veins. Two L rods are held parallel one in each hand. When the dowser is on the edge of a ground water vein the rod swings outwards. The direction of flow can be inferred by positioning oneself on the vein and holding the rod in search position. From chainage 0.00m, these L-rods are held in parallel in each hand, and walking as usual along the alignment of the road up to one KM i.e. 1000.00 m chainage. During this survey we locate the various locations where the L-rods abruptly swings

Following are the observation that shows the L- rods positions **Table 2**

Table 2

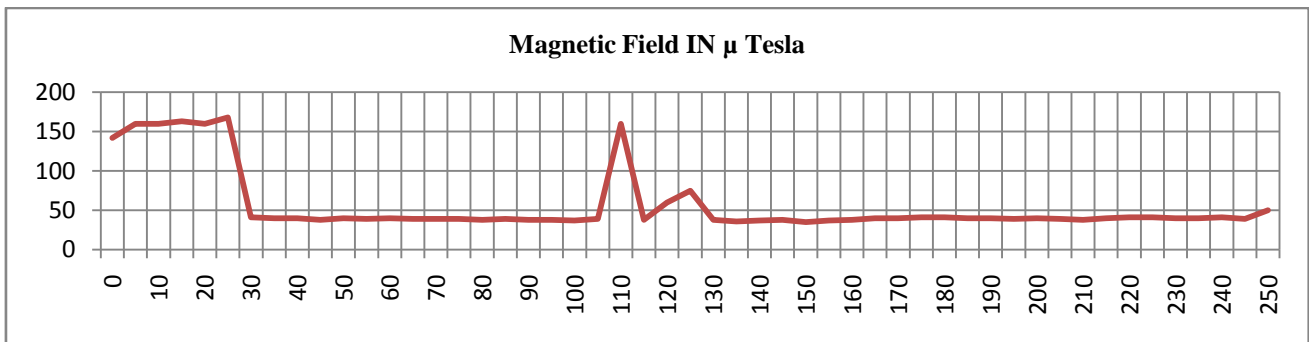
Chainage In M	POSITION OF L- ROD (At Nodal Points)	Visual Clues Recorded
20.00	Swing (turn about 60 degree)	
30.00	Swing (cross each other rod)	
50.00	Straight	Good , free from Geopathic stress
75.00	Swing (cross each other rod)	
90.00	Swing (turn about 60 degree)	no plant , road satisfactory condition
100	Swing (cross each other rod)	No plant, distresses to road
120	Swing (cross each other rod)	
150	Swing (cross each other rod)	
175	Swing (cross each other rod)	No plant, distresses to road
200	Straight	Good , free from Geopathic stress
220	Swing (turn about 60 degree)	
225	Swing (turn about 60 degree)	
250	Swing (cross each other rod)	Trees without leaves
255	Swing (cross each other rod)	
270	Swing (turn about 60 degree)	
275	Swing (turn about 60 degree)	Distresses
280	Turn each rod in 90Degree in opposite direction	distresses
300	Swing (turn about 60 degree)	Borewell at 15 m
305	Swing (turn about 60 degree)	distresses
375	Swing (turn about 45 degree)	Odha at 10 m
425	Turn each rod in 90Degree in opposite direction	Odha at 10 m
455	Turn each rod in 90Degree in opposite direction	Open plot , good road
460	Straight	Open plot , good road
470	Straight	free from Geopathic stress, good quality road
505	Straight	free from Geopathic stress, good quality road
540	Straight	free from Geopathic stress, good quality road
545	Straight	free from Geopathic stress, good quality road

590	Straight	free from Geopathic stress, good quality road
620	Swing (cross each other rod)	Temple at left side at 15m
680	Straight	free from Geopathic stress, good quality road
740	Swing (turn about 60 degree)	Babhul tree
875	Swing (cross each other rod)	Well at 6m

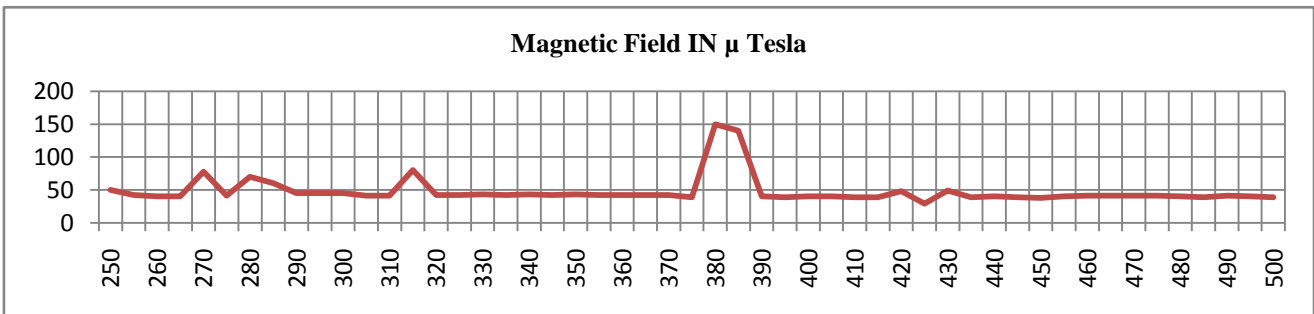
7.3 By Magnetometer

An independent magnetic field survey has been done using a magnetometer to determine the existing magnetic fields along the alignment of the road at 5.00 m interval chainages Readings are taken. The following graph shows the intensity of the magnetic field at the Chainages. Thus from these we locate the Geopathic stress zones. Following is the graph which shows the intensity of magnetic field at different chainages.

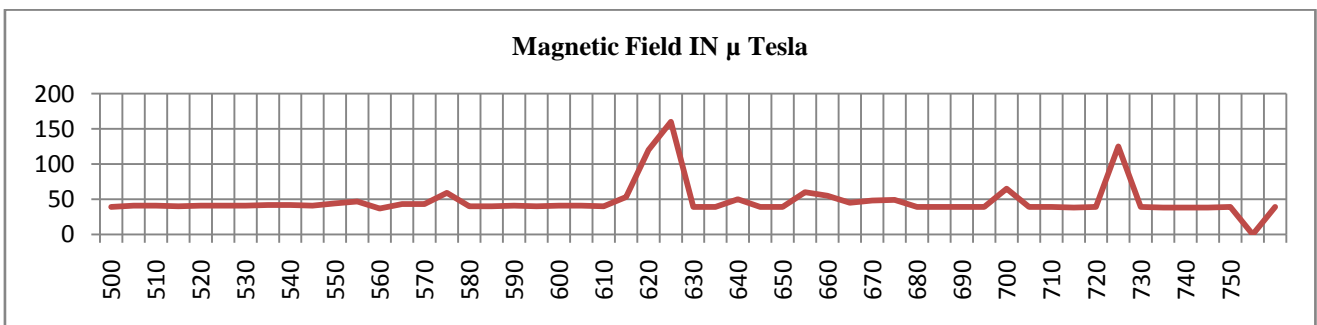
For continece graph divided in 250m chainages as below, Graph 1 to 4.



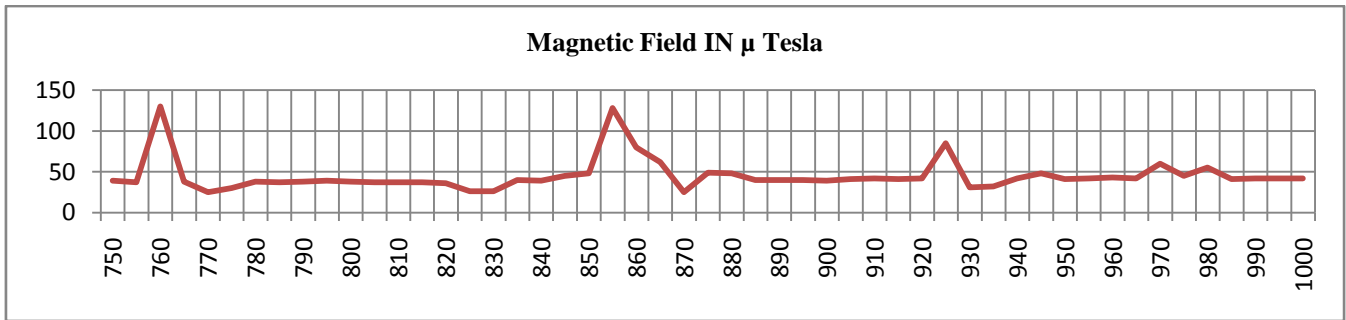
Graph 1



Graph 2



Graph 3



Graph 4

VII RESULT

From comparative study it seen that there may be exists the geopathic stress along the road pavement where the distresses occurs in Table 3.

Table 3

Chainage in M	Locations/chainages that detect the maximum distresses (By Distress Survey)	Locations /chainages where the L-rods detect the stresses (By Dowsing)	Locations/chainages where the abrupt changes in magnetic field. (By Magnetic field Detector)	Visual Clues Recorded
0 TO 50	Distresses occurs	Geopathic Stress Occurs(0 to 45 m) At 50 m no stress	Geopathic Stress Occurs Greater magnetic field at 0 to 25m.	Trees of babhul at 6m
50 TO 100	Low distresses	Satisfactory (70 m)	Normal magnetic field detect as in between 38 to 40 μ Tesla.	
100 TO 150	distresses	Geopathic Stress Occurs	Very high magnetic field detect as in 110m nodal point as 160 μ Tesla.	
150 TO 200	Distresses occurs(Moderate)	Geopathic Stress Occurs(150 to 195 m)	Normal magnetic field detect as 35 & 41 μ Tesla	
200 to 250	distresses	Satisfactory (205m)	Very high magnetic field detect as in 250 m nodal point as 50 μ Tesla	
250 TO 300	Distresses occurs	Geopathic Stress Occurs(295m)	high magnetic field detect as in between 50 to 78 μ Tesla	Borewell , babhul trees
300 TO 350	Distresses occurs	Geopathic Stress Occurs(312m,350 m)	Very high magnetic field detect as in 315 m nodal point as 80 μ Tesla	
350 to 400	high distresses	Geopathic Stress Occurs(375m)	Very high magnetic field detect as in 380&385m nodal point as 150 &140 μ Tesla	Trees of babhul at 60m, Odha
400 TO 450	Low Distresses occurs	Geopathic Stress Occurs(425m)	Moderately high magnetic field detect at 420 &430m as 48 to 49	Trees of babhul at 60m, Odha

			μ Tesla. Very low magnetic field at 425m nodal point as 29 μ Tesla.	
450 TO 500	Low Distresses occurs	Geopathic Stress Occurs(485m)	normal magnetic field detect as in between 38 to 41 μ Tesla	Good quality road
500 TO 550	Low distresses	Satisfactory	normal magnetic field detect as in between 39 to 44 μ Tesla	Straight trees , Good road
550 TO 600	Low Distresses occurs	Geopathic Stress Occurs(600m)	magnetic field detect at 575 m nodal point as 59 μ Tesla	Good quality road
600 TO 650	Distresses occurs(Moderate)	Geopathic Stress Occurs	High magnetic field at ch.615 to 625m and then normal in between as 38 to 41 μ Tesla	Temple at left side at ch.620m
650 TO 700	Low Distresses occurs	Geopathic Stress Occurs ch. 660,665m	magnetic field detect at ch.655 and 660 as 60 & 55 μ Tesla	Open space
700 TO 750	Distresses occurs	Geopathic Stress Occurs(730m,750 m)	High magnetic field detect as 725 as 125 μ Tesla.	Trees of babhul
750 TO 800	Distresses occurs	Geopathic Stress Occurs(765m)	High magnetic field at ch. 760m and then very low at 770m nodal point.	Trees of babhul
800 TO 850	Distresses occurs	Geopathic Stress Occurs at ch. 825	Low magnetic field detect at 825 & 830 m nodal point.	Trees without leaves on left side
850 TO 900	Distresses occurs	Geopathic Stress Occurs at ch. 870 ,875m	High magnetic field at ch. 855 m and very low at 870 m chainage.	Well at ch.875m
900 TO 950	Distresses occurs	Geopathic Stress Occurs	High magnetic field at ch.925m	
950 TO 1000	distresses	Satisfactory	Moderately High magnetic field	Trees of babhul

IX FUTURE STUDY

These includes that

1. Structural NDT evaluations

X CONCLUSION

From the comparative study of Distresses survey, L-rod dowsing and Magnetic field detector help us to investigate the Geopathic Stress on road pavement. The variation of stresses are occurs where the pavements have more distresses. Also in that zone trees are also bend their leaves and save them from these energies. At some chainages the L-rod dowsing gets deflected and magnetic field detector gives abruptly lower or higher readings due to the odha, borewell, temple (at chainage 295, 375 & 620m). Thus there is an also presence of geopathic stress and it affects on soils and also road pavements.

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