

Technical Analysis of Accidents on NH-22 in HILLY Terrain: Causes & Remedies

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ABSTRACT

Almost 50.507 Kilometers of stretch comes under completely hilly terrain on NH-22 starting from Solan to Shimla. The aforesaid stretch consists of sharp curves, bends and steep slopes. These features have resulted in more than 3000 cases of accidents getting registered involving more than 4100 vehicles and causing more than 780 deaths with more than 5500 serious injuries in the 10 year span of 2003-2013. There are seven major spots on this stretch where occurrence is more frequent than other places namely kiareeghat, waknaghat, kaithleeghat and more. The main reasons were found to be rash driving, narrow curves, poor visibility, rain and snow and heavier traffic at night time than the rest of the day. Now these reasons cover more than 87% of the total cases registered. The highway was constructed at the time of British rule even before independence and no step has been taken by the Government of India in this aspect to improve alignment or trajectory of this road. The main reasons were found to be lack of signboards, convex mirrors, retaining walls and light poles at critical spots. This want is resulting in recurrence of accidents. Technically speaking on the whole stretch there are only two short stretches where overtaking sight distance is proper otherwise it is lower than desired value. The safe stopping sight distance is also not enough at seven critical points on the permissible limit of speed. Though the studies clearly show that if this value is reduced by 10 kms per hour the safe stopping sight distance increases by 83.3% which can reduce the number of casualties to a great extent. The length of curvature has been found to be sufficient under permissible limit but super elevation shows huge difference compared to desired values. Apart from technical reasons the provision necessary can make the travel extremely safe which should be implemented as the earliest.

Keywords: Accidents, Sight Distance, Curvature, Major Spots.
