

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202511090528 A

(19) INDIA

(22) Date of filing of Application :22/09/2025

(43) Publication Date : 24/10/2025

(54) Title of the invention : SIGNALING SYSTEM TO MANAGE RAIL TRAFFIC IN FOGGY WEATHER

(51) International classification	:G08G0001095000, B61L0005180000, G02B0027010000, E01H0013000000, B60Q0001000000	(71)Name of Applicant : <b>1)Chitkara University</b> Address of Applicant :Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Rajpura Punjab India <b>2)Chitkara Innovation Incubator Foundation</b>
(31) Priority Document No	:NA	(72)Name of Inventor :
(32) Priority Date	:NA	<b>1)Simrat Singh</b>
(33) Name of priority country	:NA	<b>2)Meenu Garg</b>
(86) International Application No	:	<b>3)Gurjinder Kaur</b>
Filing Date	:01/01/1900	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

A signaling system to manage rail traffic in foggy weather, comprises of a signal pole 101 that is adapted with an enclosure 102 of multiple vertically aligned signaling lights 103, the signaling lights 103 are equipped with a dual-layer arrangement to enhance visibility of the signaling lights 103 for a train driver in foggy conditions, a Ni-chrome wire heating plate 104 is used as a first layer, an anemometer measures wind speed and a fog sensor monitors fog density, a vertically oriented elliptical plate 105 with miniature exhaust fans 106 disperse fog in front of the signaling enclosure 102, an integrated LDR sensor measures ambient light levels, a thermal camera 107 monitors the tracks in foggy conditions for detecting animal, people, or train movements, a holographic projector 108 for projecting the active signal light to driver in dense fog, multiple-directional acoustic sensors monitors the ambient sounds of the railway tracks.

No. of Pages : 21 No. of Claims : 7