

MATHERAN - AN ECOLOGICAL SENSITIVE HILLSTATION IN INDIA WITH POOR ROAD-INFRASTRUCTURE AND MASSIVE POLLUTION; TRANSPORT-SCHEMES; Part III

Updated by Dr. Frank Wingler, March 2019



Pollution by Garbage Dump behind a 5 Star Hotel at Matheran

Synopsis:

Matheran is ailing under poor road-access, poor road and trail conditions, air-pollution by stirred-up laterite-dust mixed with horse-dung and under waste-littering.

Programmes have commenced to bring betterments and to improve the road and cleanness situation. **“Clean-Up Marshalls”** advise now tourists not to litter the eco-sensitive zone and the beauty of the nature of Matheran.

On the 2 feet NG Toy-Train, the introduction of the dual-pipe, graduate release and indirect working compressed air-brake system in combination with the old 1903 bumpy tramway coupling system has resulted in

hazardous train-set jerk/jolt movements, especially on down-gradient runs, that increase the derailment proneness. Therefore, the train-speed had to be reduced, which hampers a frequent train-service between Neral and Matheran. The Train-Drivers have to run trains, especially on down-gradient and on tight curves, in a snail's pace with upmost vigilance, to avoid the risks of a derailment caused by train-set jerks. On 21th October 2018, a parcel-van of the shuttle service derailed on a turnout at Amman Lodge with a lucky narrow escape for the passengers in the adjacent coaches. Under modern Safety and Risk Management Aspects, this unwanted bad event has to be investigated and treated as a **"NEAR MISSED BAD EVENT"** and therefore as an **"ACCIDENT"**. Lessons should be learned.

Post Scriptum: In the periode from October 21th to December 31th 2018 the Matheran Hill Train faced **FIVE DERAILMENTS!!**

Under the topic **"TRAFFIC SHEMES FOR THE UNIQUE ECO-SENSITIVE HILLSTATION MATHERAN IN INDIA"** the author had published November 2017 on <http://www.drwingler.com> (free for download) his impressions collected during a one month visit in October/November 2017.

No Transport Improvements between 2017 and 2018:

One year later in October/November 2018, no improvements could be experienced, only further deterioration detected, concerning the poor infrastructure, bad conditions of the road-access, car-park, cart-roads, market road and trails to the scenic visiting points. Visitors throw their plastic thrash still carelessly each and everywhere. During dry season the air gets heavily polluted by the red laterite-dust stirred up by the horses, staining the shops along the market road and the foliage along the trails to the points.



Foliage stained through massive Air- Pollution with red Laterite Dust stirred-up by Horses

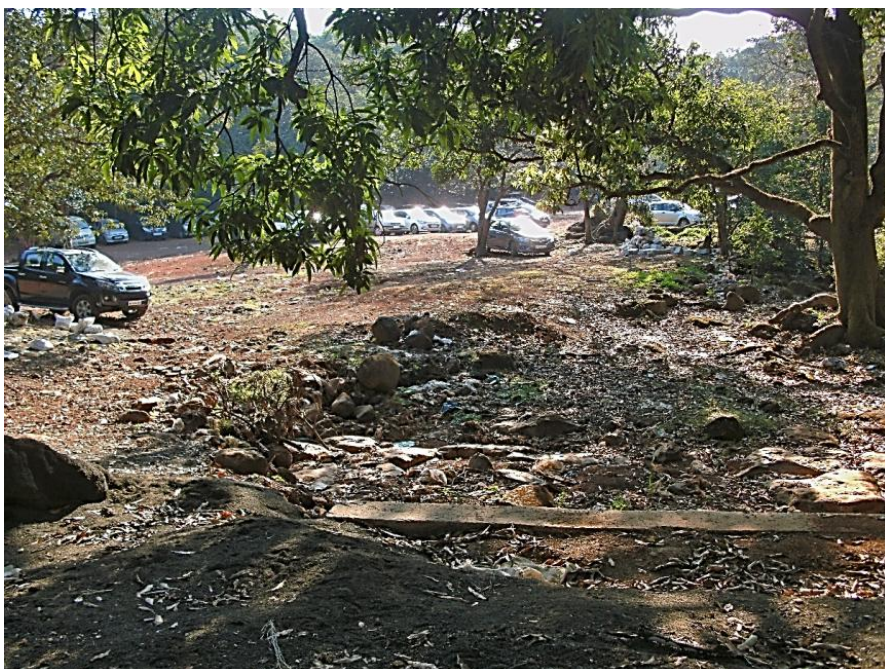
The top picture as well the following pictures had been taken behind a 5-Star-Hotel. Kitchen waste and waste water are discarded into the forest attracting stray dogs and monkeys, which in their high uncontrolled population growth are a nuisance and menace to the visitors:



Pictures taken October 2018 behind a 5-Star Hotel at Matheran

As being told, programmes have now commenced to improve the traffic and pollution situations. ***“Clean-Up Marshalls”*** watch now over the cleanness on roads and points for betterments.

For the economic wellbeing and development of this ecological-sensitive hill-station a good road-access and a proper taxi-stand cum car-park with a road-rail hub is essential. An advisable location for a proper taxi-stand, car-park and road-rail hub could be near Dasturi, where the trees have already withered away due to the urine of the horses:



Advisable Location for a combined Taxi-Stand, Car-Park and Road-Rail Passenger-Hub

The cart-road from Dasturi to Market is in a deplorable state-of-affairs. The Market-Road is dilapidated producing during dry season red laterite-dust mixed with horse dung staining shops and affecting health of humans with no improvements since several years:



Dilapidated State-of-Affairs of Market Road without any improvements since Years

To sprinkle water by the fire-brigade on the dusty road produces alleviations only for less than one hour. Horses will ruin whatever pavement material will be used. Horses have to be banned from the road from Dasturi to the market and in the market area. **From Dasturi to market a dedicated trail for horses should be provided !.**

Safety Enhancement Works for the Toy-Train Service in Progress:

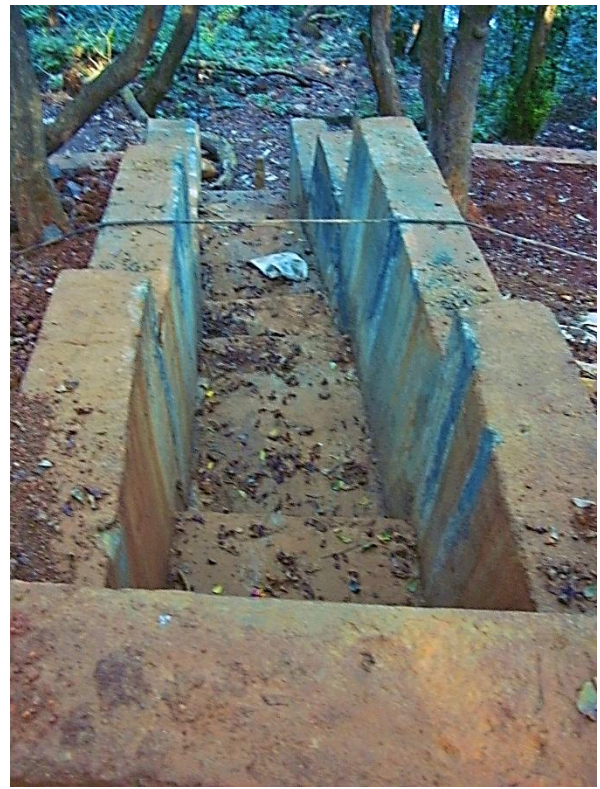
Since November 2017, an impressive progress could be detected in the safety-enhancement-works on the **Toy Train** (see: *MATHERAN'S TOY TRAIN, THE JOY AND PRIDE OF TOURISM IN MAHARASHTRA, INDIA, UNDER SAFETY SCRUTINY*; published on: [November 11, 2017& December 10, 2017](#); free for download from <http://www.drwingler.com>). Crash-barriers, preventing coaches to tumble down the abyss in case of a derailment, had been erected:



Crash-Barrier near Governor Hill (Panorama-Point Rim); but Track still in poor Condition

In November 2018 the Crash Barriers on the Section Jumma Patti to Neral had not yet been mounted.

On many sections retaining walls/gabions secure now the formation and subgrade. The construction of catch-drains, gutters and culverts to secure the track against destruction by water during monsoon time is going on:



Ongoing Investments in Catch-Drains, Gutters and Culverts securing the Rail-Track during Monsoon Time

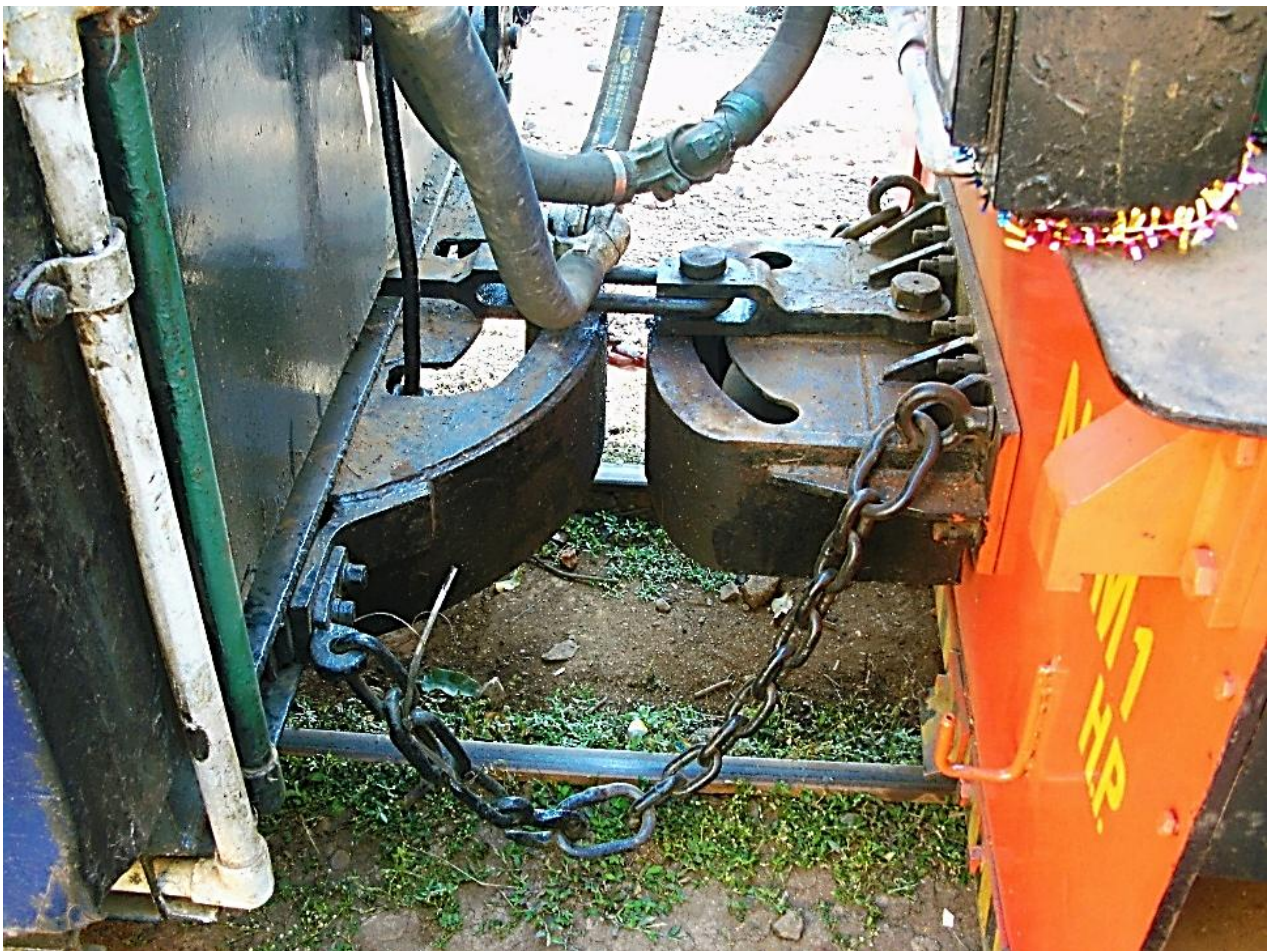
But the rails are still not in good shape. At many spots kinking rail-joints on outer curve-rails (high-rails) can be detected adding to train derailment risks:



Risky kinking Rail-Joints on outer Curve-Rails contributing to Derailment-Proneness

Not only the poor conditions of the rails, but also the **TRAINSET-JERK/JOLT MOVEMENTS**, inflicted by the recently installed unfavourable dual pipe compressed air-brake system in conjunction with the old primitive undamped tramway-coupling system from 1904, add to the **DERAILMENT-PRONENESS, especially on down-gradient runs when trailing on curves**. As well known amongst railway engineers, track geometry-parameter-defects, train-set jerks, sand, corrosion and solid impurities on rails as well wrong coach loading add to derailment risks.

The train-coupling system is not that of a railway but of a tramway from 1904. Between the blocks there are gaps of 2 to 3 cm, which can open or close during a train-run. On a 6 coach train-set, those gaps can sum up to about 18 cm, opening and closing without any damping:



Not Force-locking 1904 bumpy Tramway-Coupling System of Matheran's Toy-Train

The recently installed dual-pipe, graduate release and indirect working compressed air-brake system with a distribution valve does not allow an individual brake power adjustment for each individual coach, as before with the manual operations by experienced brake-porters.

However, under **modern Safety-Aspects and -Standards**, it is not anymore possible to position brake-porters outside between the coaches standing on the foot-boards and exposed unprotected to the weather conditions.

The mentioned derailment-proneness factors might have come together on Sunday 21st. October 2018 at noon, when a parcel-van of the shuttle-service derailed near Aman Lodge on a poor aligned turnout (see also: **MATHERAN'S TOY TRAIN, THE JOY AND PRIDE OF TOURISM IN MAHARASHTRA, INDIA, UNDER SAFETY SCRUTINY**; published on: [November 11, 2017](#) & [December 10, 2017](#); free for download from <http://www.drwingler.com>). The passengers in the adjacent coaches had a narrow escape since luckily the derailed parcel-van did not pull down the passenger coaches. Under modern **Safety and Risk Management** aspects, this unwanted bad event has to be investigated and treated as a **"NEAR MISSED BAD EVENT"** and therefore as an **"ACCIDENT"**! Lessons have to be learned.



Shuttle-Service Parcel-Van slow-Speed Flange Climbing Derailment on poor Quality Turnout at Aman Lodge; 21-10-2018 – a “Near Missed Bad Event” with a narrow Escape for Passengers

On Monday 05th November 2018, the author travelled with the 2 20 pm down train to Neral. It took three hours and 23 minutes to reach Neral from Matheran. The author experienced heavy train-set jerk/jolt movements produced when application of the compressed air-brake system in conjunction with the old bumpy, not force-locking, 1904 tram-way coupling.

The train-drivers are under pressure to avoid and prevent any unwanted derailment under any condition. With this new brake-system in conjunction with the 1904 bumpy tramway coupling system it is not possible to negotiate smoothly curves on a down-gradient run. Therefore, the train-drivers

are compelled to slow down the train before tight curves or even to stop the train at certain spots before a curve and to negotiate the tight curves in a snail's pace.

Between Jumma Patti and Neral the engine developed a technical problem in producing compressed air for the main reservoir of the new brake system. For the last 3 km the train had to go on a **“Stop-and-Go”** mode with plenty of train-set jerks, and on the last 100 m passengers had to face 6 terrible train-set jerks.

With a down-gradient run journey time of approx. 3 hours between Matheran and Neral, the former time-table with daily 4 to 5 pair of trains cannot be managed. The track-alignments are also not in proper position for a faster service, and the riding comfort is rough. The crash-barrier erecting works between Jumma Patti and Neral are not yet finished. Concerning the drains, catch-drains and culverts a lot of works have still to be done.

This means, that for the 2018/19 season the outlook for a faster running and reliable toy-train service with a higher frequency between Neral and Matheran is grim.

The hope, that in future the rail-track and the train-set jerk problems will be solved and a more frequent toy-train service between Neral and Matheran could be arranged, is currently resting in cuckoo's home.

Wither a Rope-Way:

The thread, that a proposed **Rope-Way** project might exploit the ecological sensitive zone, has currently withered away. One of reasons are difficulties in financing. However, the heavy air-pollution with laterite-dust, mixed with horse dung and stirred up by the horses on the bad roads and trails, remains a serious hazard of Matheran.



The Threat to the ecologic sensitive Zone by a proposed Rope-Way People-Mover has withered away

AMENDMENT



**Force-locking Center-Buffer-Coupler with Schockabsorber
on a German Narrow-Gauge Railway**



**Force-locking Coupling System with damping Element of scenic 2 ft
NG Welsh Festiniog Railway, Wales, UK**



Force-locking Coupling System with damping Element of Kalka-Shimla 2 1/2 f NG Hill-Railway, India



Force-locking Coupling System with damping Element and longer Shaft for negotiating tight Curvatures of ZDM5, 2 1/2 ft NG Dabhoi Railway, India



Force-locking Coupling System of NDM-5, 2 ft NG Gwalior Sheopur-Kalan Railway, India



**Five Derailments on Matheran Hill Train within 10 Weeks in 2018;
Track Off-Loading Derailment, December 2018**



**Upper Section of the *"ONLY-ONE-ROAD"* to Matheran,
currently under Refurbishment; Pict. by N. Savant, Feb.
2019**