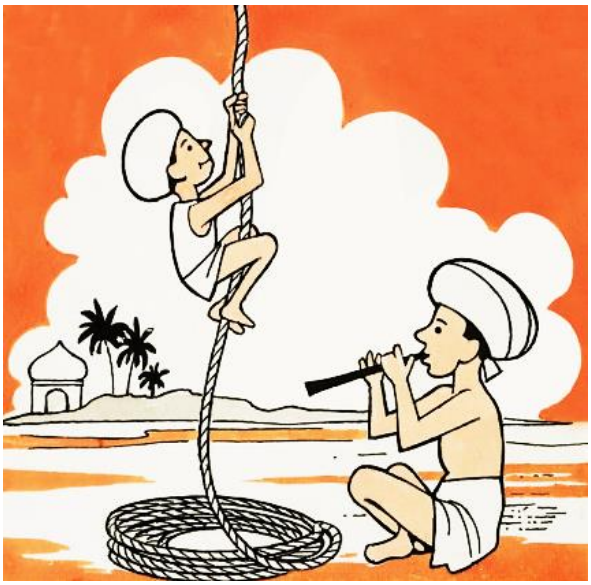
MUSINGS

The Indian Rope Trick at Higher Altitudes



I joined the unit in December 1981. We were located at 'Mile-Five' on the Gangtok-Nathula Road (GNR) and the unit was situated at an altitude of about 7000 feet. My predecessor, Lt Col (later Maj Gen) AP Palta had created a very well knit and efficient team, and he gave me some very useful guidelines. There were no skeletons in the cupboards. The living conditions at the high altitude posts were, indeed, very difficult. Electricity was generated by 'op-works generators' and if the equipment failed, the evenings were dark and dingy. Frequent landslides led to breakdown of road communications, and whenever that happened, supply of rations and fuel was disrupted. The author of this piece was my unswerving colleague and it did not take me long to discover that I could neither improve upon his staff work, nor his administrative acumen. I decided to trust him to the hilt, and that gave me a lot of time to reach out to the units, meet officers in the forward posts and to study their problems, on the ground

– Maj Gen Surjit Singh (Retd)

By Brig KN Harikumar, with inputs from Col Dhiraj Mullick

"Mountains eat up men and material" - I wrote this opening remark in a draft citation for Dhiraj Mullick as desired by my Commanding Officer in recognition of his pioneering work on the Mini Rope way which our EME Battalion "rigged up" from the scratch in North Sikkim, thirty-five odd years ago. Warfare in the mountains is a complex affair with a second enemy in the form of Nature. Adverse climate and unpredictable weather takes a heavy toll on the fighting soldier. But what is seldom acknowledged is the nightmare of logistics in the mountains which the Services like ASC, AOC and EME silently perform without much ado and recognition. The following episodes are a tribute to a few such acts of gallantry and dedication by an insightful leader and his band of colleagues.

Circa 1981: Somewhere near Gangtok, Sikkim. I was the second-in-command of an EME Battalion. A new Commanding Officer –Lt Col Surjit Singh, VSM was expected to take over the command from Lt Col AP Palta. Stories carried from Agra where he was serving gave a feeling of unease to the officers. Someone said he is a "bully" and someone else felt he is known to be very demanding and has a very unorthodox way of doing things around. I did not worry much as I was already "entrenched" in the battalion, having served as an OC Workshop at high altitude in the battalion before moving in as second-in-command.

During my initial briefing, Col Surjit asked me how I would like him to work and what priorities I would suggest for him. I had the audacity to tell him this: “Sir, don’t be seen much within the battalion. I will take care of all the internal processes. I suggest you sell the unit outside the battalion.” Believe me, he literally did exactly that during the entire period which we served together!!

Soon, his ability to interface well with the GOC, brigade commanders and the Commanding Officers of our user units came to limelight. But what scored the day was his passion for anything innovative and provided ample opportunity to explore. His first foray came soon after assuming command and was based on a visit to Oonthdhar, near Nathula. During this visit, he saw soldiers struggling to carry the loads to their forward most pickets. Rations and Kerosene oil was the main load being hauled up to heights where even mules could not reach and many a time soldiers were even forced to abandon these precious loads enroute. The engineer in him thought of erecting a small ropeway with the help of a Trevella winch which we in EME used for recovery. He gave this task to Captain Dhiraj Mullick, our adjutant. In Sikkim there were old steel ropes lying all over with no one claiming ownership.

Soon Dhiraj used a motor cycle engine mounted on an angle iron frame (chassis) which was duly anchored to the ground using anchor pins. A travella winch with steel ropes completed the “mini ropeway” as the ensemble was soon named. The first fabricated rope way was laid for a span of 10 metre under the supervision of the CO. Very soon, the span was increased and it was able to carry 150 kg load from the base across an aerial distance of 70~80 meters (200-250 ft) in less than three minutes. As time passed the ropeways were improved and by using three mini ropeways in tandem 150 kg load could be moved up 600 ft (aerial distance) in about 10-15 minutes. We now had a very good ropeway in hand for any unforeseen contingency in the high altitudes like disruption of road communication due to land slide etc.

Opportunity came soon for us to test our innovation. There was a massive road block on the way to Chungthang in North Sikkim and the supply lines to the forward posts were cut. The Bailey Bridge (made from pre–fab trusses and built by the Engineers / Border Roads Organization) got washed away due to heavy rains. Its foundations had given way. Those days North Sikkim was very underdeveloped and there were no pukka roads/ bridges. The span of the bridge was approx. 60 meters. Engineers said they could only re-build the bridge after couple of months once the rains receded as the water flow was very high and fast at that time.

However, there was an urgency to reopen the axis because on the other side of this bridge there was one brigade and this road/bridge was the single axis for maintenance of supplies to them. The reason for urgency was the need to stock up before winter (important activity at those altitudes) when this single road would close. Helicopter sorties were also planned and a big logistics problem was at hand. At that time, with the permission from GOC of the Division, a “mini ropeway” was set up under the leadership of the CO, EME Battalion across the span of the bridge. The team leader was our able adjutant Capt Dhiraj Mullick.

The beauty of this EME ropeway as recounted by Dhiraj Mullick to me was that once loaded, the trolley used to go across to the other side (north Sikkim end) by gravity as it was lower than our home end. “We used to just release the brake and it used to go full speed on its own. As a result, we could send much more load @ 250 kg – mostly dry rations like atta and rice and milk powder was loaded in the trolley. We also transported a lot of hay for the mules. Once unloaded, the empty trolley was easily winched in by the motorcycle engine which we had anchored on the home bank.” said Dhiraj to me with great pride!. This timely help was appreciated by all concerned. Two sketches of the contraption rigged up by us are given below.

As usual, with any such venture not organic to the prescribed tasks assigned to a particular service, the Battalion and the CO had to face criticism from higher ups for treading on the toes of the Corps of Engineers, whose primary duty it was to " bridge" the gap.

Another area which attracted the attention of Col Surjit was the wasteful underutilisation of Diesel Generators, which operated at a low efficiency at high altitudes. While plenty of water flowed down in streams giving sufficient "head" with potential energy which could be gainfully utilised to generate hydel power, the establishment relied on wasteful practices of using DG sets. Soon, he embarked upon another mission to create Micro Hydel Power Stations. A start was made behind our officers' mess which was located in a steep slope. Captain Jacob Mathew and his team soon made some headway and were able to generate 1000 watts of power utilising an array of parts retrieved from vehicles to act as generators and control systems. Col. Surjeet shared with me the first experience with great amusement when all the bulbs connected to the generator fused in one goes – for lack of voltage/ current regulation!
Some of the other actors in this venture we remember now are SL Simeon, Sunil Sharma and SS Bhinder. Both the GOC's of the division Gen VN Sharma and Gen Hanut Singh appreciated the initiatives of the EME Battalion.

Sikkim is now an energy surplus state with number of ropeways dotting the landscape. Gangtok has a two stage cable way -a delight to both commuters and tourists. What started off as merely a " pipe dream" of some of the enterprising officers from EME have been translated to real life installations, and they have improved the quality of life; not only of the soldiers, but a large cross section of the community.
