



INTEGRAL

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News



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ICF OFFICIAL MONTHLY NEWS BULLETIN

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Shri Rajen Gohain, Hon'ble Minister of State for Railways and Shri S.Mani, General Manager ICF, flagged off the 1st Military Langar Coaches on 23rd Sep at ICF in the presence of senior officials of ICF.

Institute of Rolling Stock Engineers, ICF Chapter, organized a half-day seminar on "Improved Interiors for Rail Coaches" on 16th Sep. Six papers were presented by various firms about the latest developments in the field of Coach Interior Furnishings.

The review of one month one innovation idea of Furnishing officers was held on 08.09.16 by Shri. S.Mani, General Manager / ICF. Staff and supervisors who contributed to reduction in cycle time of LHB Power Car were awarded Rs 2000 each and merit certificates by GM/ICF during this meeting. Three officers who gave best suggestions were also given merit certificates by GM.





Rajbhasha Exhibition, on the occasion of 'Rajbhasha Utsav – 2016', was inaugurated on 2nd Sep by Shri S. Mani, GM / ICF.



Rajbhasha Utsav Valedictory Function was held on 28.09.16. Dr Chitti Annapurna, Professor and Head of Department of Hindi, University of Madras, was the Chief Guest on the occasion. Awards were distributed to the winners of various competitions.



52nd Annual Day of ICF SJ Primary & Nursery school was held on 9th Sep. GM/ICF, chief guest, gave away prizes to the winners of various competitions.



ICF Institute conducted a cultural evening on 09.09.16. Shri. S. Mani, GM / ICF, other officers and Institute members, participated in the program. Shri. L.C. Trivedi, CME / ICF, gave away mementos to the cultural performers.

Shri S. Mani, GM / ICF, reviewed one month one suggestion of Accounts Officers on 21.09.16. Two Accounts officers were given merit certificates by GM.



124th OLIC meeting was held on 8th Sep.



Onam festival was celebrated by ICF staff on 9th Sep. GM/ICF was the Chief Guest.



60th Raising Day Celebrations of RPF were held on 20.09.16. Shri L. C. Trivedi, CME / ICF, was the Chief Guest on the occasion.



As part of "Swachh Bharat" cleaning was done at various places of ICF. On 24th Sep cleaning was started by Shri Shishir Dutt, CME/Plg, at Kalyana Mandapam.



International Elders Day was celebrated at ICF Hospital on 28.09.16. Shri M.Kumaravel, Sr Physiotherapist, gave tips on Simple Exercises for Senior Citizens.



New building for office and stores of Road Transport and Millwright office and store was inaugurated by Shri G. Sekar, SSE, Shop-88, in the presence of Shri S. Mani, GM/ICF and senior officers on 29th Sep.



East Colony children's park was inaugurated by Shri S.Sivaraman, SSE/87 on 27th Sep, in the presence of GM and Senior officers.



Drawing and Essay competition for children was conducted by ICF Women's Organisation on 18th Sep



Integrated Employees' Welfare Centre was inaugurated by Smt Kothainayaki Prabakaran, ChOS/PB, on 27th Sep, in the presence of GM and senior officers.



Chennai Pain and Palliative Care organised an awareness programme on palliative care during the raising day celebrations at AWTI ICF on 26.09.16.

Shri S. Mani, GM / ICF, reviewed the one month one suggestion of Design Officers on 15.09.16. Three officers were given merit certificates by GM.

IRTSA organized a Health Awareness Programme on 27.9.16 at TTC/ICF. GM/ICF was the chief guest.

Four Shell division officers were awarded merit certificates by Shri. S. Mani, GM / ICF for their best suggestions and implementation for the month of August 2016 under one idea one month scheme on 12.09.16

First Antyodaya coach assembled with air spring bogies rolled out from LHB Unit on 29th Sep. it is the First LHB Shell with air spring FIAT bogie.

To communicate with an ICF CUG subscriber, dial 99 from any railway phone, to get dial tone. Then dial the required CUG Number.

PERSON OF THE MONTH



July'16: Shell
K.Gnanamani,
Tech-3/21



Aug'16: Shell
A.Tukaram
SSE/LHB/19



Aug'16: Fur
J.Senthilkumar
Tech-1/28



As a trial, fixed in ACCN 373



Shri R.P.Uday Kumar, CEE/ICF, congratulated N.Naveen Kumar, S/o. Shri K.Naresh Kumar, Tech-1, Shop29, Studying 9th standard in GK Chetty Vivekananda Vidyalaya, Ambattur, who has won GOLD medal in the National Chess Championship under17 category for school students, conducted by Vidya Bharathi at Bhagalpur, on 15th Sep. He was trained by Shri R.Amaresan, SSE/TS/S.

OFFICIAL POSTINGS

Name S/Shri/ Smt	Previous	Present
L.P.Anand	CME/QA	VR
Manish Pradhan	CWEF+MRA	CWEF
Shishir Dutt	CME/Plg	CME/Plg+MRA

GM desires that all male staff wear uniform (Shirt only) on a voluntary basis, once or twice a week. The shirt will be in light blue colour with 'TeamICF' printed on the top of the pocket. It is proposed to purchase the required number of shirts in bulk quantity at a low cost i.e.Rs.400/- for half sleeves and Rs.450/- for full sleeves.

Interested employees may please give their size and number of shirts required (Max 2 only) and the amount, to their controlling supervisors for consolidating the requirements. It is reiterated that wearing of the above uniform is purely on a voluntary basis and only interested employees may volunteer.

EMPLOYEES RETIRING on 31st October '16

1	Dr.Hemavathy	Addl. CMS	
2	Ravisundar	Sr.Tech	13
3	Iqbal	Tech-1	16
4	Rajeswara Ananda	J.E	20
5	Dorairaj	Tech-1	22
6	Lakshmipathy	Tech-1	23
7	Chandramohan	Sr.Tech	41
8	Dhananjayan	Sr.Tech	45
9	John	SSE	PCOS
10	Vijayalakshmi	O.S	CE's Office
11	Kalaichelvi	Ch. Pharmacist	Hospital
12	Banumathi	Accts Asst	Accts Fur
13	Alagesan	Sr.Tech	30
14	Rajakumari	Helper	30
15	Selvadurai	Sr.Tech	30
16	Mohan	Tech-1	36
17	Jayachandran	Sr.Tech	85

We wish them A Happy & Peaceful Retired Life

Last Date for submission of application:

AME (PQ) - 5 UR+1 SC: 08.10.16
AME (Group B) – 1 UR+1ST : 15.10.16
Head Canteen Manager - 12.10.16

In connection with the 'Rail Vikas Shivir' (25th -27th November 2016), a brainstorm meet is proposed to be held with the objective to generate several innovative yet practical ideas from within the organisation that would help Indian Railways in achieving its commercial and societal objectives and become a world-class organisation. Railway Board has shortlisted a total of 8 themes and one among the themes allotted to ICF is as below.

Theme Description		
Sl.No	Theme	Description
1.	Modernise Indian Railways by using best-in-class technology	Evaluate 5-6 big technology shifts that Indian Railways will make in a decade and create the road map along with feasibility for making the same.

In this connection a portal has been kept open to receive suggestions from Officers and Staff of ICF.

Hence, suggestions related to the theme if any, may please be uploaded in the main page of ICF Railnet website <http://10.534.11> - where a provision has been made for entering the same under the head -

Suggestions For RAIL VIKAS SHIVIR.

All Supervisory Officials in charge of Shops/Offices are requested to give wide publicity to the employees working under their control.

We deeply mourn the sudden demise of the following staff

1	Palanivel.D	SrTech/FGL/18
2	Paramasivam.B	Tech-1/Carp/30
3	Manoharan.V	Tech-1/FMW/80



MOVE... TO REMOVE...!
Physio.Kumaravel.M
Sr. Physiotherapist/ RH/ICF
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 Ph 9003149269



BACK EDUCATION



Low Back Pain – a Recap

- ❖ Low back pain is a universal musculoskeletal problem of the modern scientific advancement cum speedy life.
- ❖ It is the most common ailment next to common cold.
- ❖ Over 80% of the population experience back pain at some point of time in their life.
- ❖ It is not gender-oriented and both male and females may have this symptom.
- ❖ Most cases of the back pain is sudden onset due to major or even minor injury.
- ❖ some of them only are gradual.
- ❖ Pain may be constant or intermittent depending upon the cause.
- ❖ Low back pain is localised or difussed in nature and sometimes radiating down on one or both legs too.
- ❖ Nature of pain is dull ache or sharp or piercing or burning sensation.
- ❖ Sometimes pain is accompanied with numbness or irritation and weakness due to nerve problem.
- ❖ Most of the low back pain worsens on work and is relieved by rest.
- ❖ Causes : Mechanical or pathological and psychological.
- ❖ Most of the back pain is due to mechanical causes, particularly in younger agegroup and also due to degeneration in aged individuals.
- ❖ Risk factors for the lower back pain are..
- ❖ Overweight.
- ❖ Inactive sedentary life style.
- ❖ Job involving lifting/carrying heavy weights and works that twist the back.
- ❖ Psychological stresses may also be a cause for the back pain symptom.

Treatment:

- ❖ Depends on causes, duration, severity of the pain, accompanying symptoms and age of patients treatments are as follows..
- ❖ Rest
- ❖ Medical
- ❖ Physiotherapy.
- ❖ Surgery.

- ❖ All the back pain doesn't need medical attention. Some of them will get better spontaneously.
- ❖ Short absolute rest and restriction in activity is enough to relieve from mild strain in the back.
- ❖ Cryotherapy (Ice pack massage) or hot water foamentation may give relief from the back pain which is mild in nature.
- ❖ Back pain with neurological deficit symptoms after an injury needs an urgent care.
- ❖ In severe back pain, non-steroid anti inflammatory drugs / muscle relaxants /analgesics /antidepressors may be needed to suppress the pain .
- ❖ If Essential.. epidural steriod is also needed to relieve the pain.
- ❖ Drug therapy should be as per doctor's advice to avoid adverse effects.
- ❖ Physiotherapy is an excellent way to relieve from back pain, with fewer side effects.
- ❖ Physiotherapy management
- ✓ Exercises.
- ✓ Electrotherapy .
- ✓ Education.
- ❖ Exercises :
- ✓ Exercises program is a vital part of low back pain management.
- ✓ Back pain relieving exercises are not common to all.
- ✓ Exercises depend upon the cause, symptoms severity of the pain, accompanying illness as well as patient's age.
- ✓ Don't do exercises on your own .
- ✓ Consult the doctor and get guidelines from physiotherapist before starting the exercise.
- ✓ Begin the exercise after the pain started to subside.
- ✓ Too much exercises or improper exercises are as harmful as no exercises.
- ✓ Scientific-based, systematic exercises may relieve the pain gradually as well prevent the recurrence of the pain.
- ✓ Therapaeutic exercises are classified as follows:
 - Pain relieving cum stretching exercises
 - Strenthening exercises.
 - Posture correction exercises.
- ✓ Always do warm up prior to exercise and warm down after exercise.
- ✓ Synchronization of movements with breathing is good for more therapeutic benefits.
- ✓ Keep ever in mind " Exercises are also medicine".
- ❖ Electrotherapy
- ✓ Electrotherapy combined with exercises give effective therapeutic results in low back management.
- ✓ Physical agents used to treat the low back pain are.. heat /cold/sound/electrical stimulation etc...
- ✓ Selection of the modalities depends upon the causes, symptoms, duration of illness and age of the patient too.
- ❖ EDUCATION : Education plays an important role not only in the management of low back pain as well prevents the recurrence.
- ✓ Maintain ideal body weight.
- ✓ Eat a healthy bone preserving nutrient rich diet.
- ✓ Ensure your back in good posture during activities and even when rest too..!

- ✓ While lifting /carrying objects follow proper methods.
- ✓ Don't do high intensity activities. Know your limit.
- ✓ Ensure prompt office ergonomics.
- ✓ Avoid rushing to complete the work, plan the activities.
- ✓ Have a short "health break" in between the works.
- ✓ Do systematic exercises regularly.
- ✓ Don't forget to warm up before play or any other activities and even during exercises.
- ✓ Beating the blues with smile.
- ✓ Overall improve your general health.
- ✓ Adopt essential lifestyle modifications in habitual routines and prevent the back pain.

"Prevention is the best"

- ✓ **Be physically fit ! Be stress-free! Have a healthy back!**

- ✓ Hope we have covered almost all the aspects of Low Back Pain.
- ✓ I would like to Thank all our readers for their overwhelming support for the past three and a half years. Keep on asking your questions/doubts regarding low back pain and boost me in my mass health education process.
- ✓ My sincere request to all is that you are not required to follow each and every thing mentioned in this series of articles. Try to follow maximum things as much as possible to lead a healthy back.
- ✓ The opinion/suggestion of Readers is solicited for the next topic as to which part of your body needs more attention for physio care, so that we can start a new journey on Health Care.

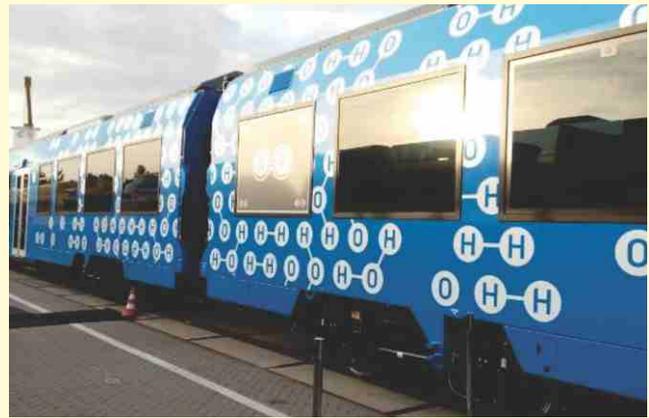
Wait for further steps to move.....



Dy.CME/LHB - Trolley Bin for CNC Plasma Cutting Machine



Suggestion given by AWM/LHB - Stacking Arrangement for Bolster Assembly



French company Alstom unveiled the first-ever passenger train powered completely by hydrogen at Berlin InnoTrans trade show on 20th Sep. The hydrogen train or "hyd rail" will be put into service by December 2017. After two years in development, the "Coradia iLint" train offers a zero-emissions alternative to Germany's existing fleet of diesel trains, thanks to a roof-mounted tank of hydrogen fuel. It is a DEMU converted into hydrogen filled train.



Battery-operated loco pulsers imported from UK, are under trial in Fur.

Indian Railways Men's Hockey Team has won MCC Murugappa Gold Cup Hockey Tournament 2016 for the first time held at Chennai from 1st September - 11th September 2016.

Indian Railways team won Senior National Powerlifting Championship at Tata Nagar (Jamshedpur) from 7th September - 11th September 2016. Indian Railways team won both Men & Women Championship as well as overall Championship.

Annu Rani smashed her own national record and in the process, she became the first Indian woman to cross the 60m mark on the third and penultimate day of the 56th Open National Athletics Championships. Annu, representing Railways, who won a bronze in the 2014 Incheon Asian Games, threw the javelin to a distance of 60.01m to erase her own earlier national mark of 59.87m.

Railway is set to hand over the management and operation of its retiring rooms and dormitories to the IRCTC with a view to making better use of the existing infrastructure to improve amenities and services.

PERSONAL RAPID TRANSIT



PRT consists of small and very light 2 or 3 passenger vehicles running on elevated guideways under computer control (no human driver). The vehicles are electric but have no batteries as they take power from electric contacts in the guideway. As vehicles are small and light, the needed infrastructure (guideways and stations) is cheap. Because traffic is computer-controlled and the number of vehicles is limited, there is no possibility of a traffic jam.

Computers find the optimum path to each passenger destination and also avoid collisions by enforcing a safe distance between vehicles. The chances of a collision are much lower than in automobile traffic because the reaction time of a computer is much shorter than that of a human driver, and also the chances of something unexpected happening on the guideway are much lower than on the streets. Shorter headways can be safely used in PRT guideways than in automobile traffic. Guideways cross each other at different heights, so a side-impact is impossible. Special high speed corridors can be built for long trips, but the speed on most of the network would be around 60 km/h (40 mph).

PRT vehicles have extremely few moving parts because they use linear electric motors for both propulsion and braking. A magnetic field accelerates/decelerates the vehicles. This reduces maintenance requirements to a minimum and eliminates environmental effects on braking such as rain and ice. Vehicles run on rubber wheels over a metal surface, the wheels are not connected to any motor, they are just for support. The wheels and motors run inside the guideway rather than on top of the guideway for maximum stability. A mechanical or magnetic switch mounted on each vehicle determines which way the Vehicle goes at diverge points. Light vehicles are essential to keep the guideway dimensions and cost to a minimum. A very important aspect of PRT is that it can be used to automate the transport of cargo, mail, and waste. The loading and unloading of PRT vehicles can be automated using standard, reusable containers. PRT makes economical the shipping of small amounts of cargo, enabling a "just on time" economy. In city areas of high artistic and historic value, guideways can run through tunnels underground to avoid visual impact, but this is more expensive, and not as enjoyable for the passengers.

Safety

PRT is extremely safe due to automation, moderate and constant speed, operation on rails, no fuel on board, redundant design, avoidance of at grade crossings, and separation from pedestrians and other types of traffic. PRT would save thousands of lives. Passengers travel in very small groups, so the consequences of a terrorist action would be much less severe than in trains, buses or airplanes. This makes PRT an unlikely target for terrorists.

Capacity

One guideway lane has 2 times the passenger capacity of a freeway lane, and 4 times the capacity of a street lane with traffic lights.

Vehicle weight

Less than 600 kg. Half the weight of a small automobile.

Capital + Operating Cost

12 + 12 cents per passenger km. 40% less than rail. 20% less than buses.

Aesthetics

Some people do not like the appearance of PRT guideways and vehicles, but the question is: Do they find asphalt, smog, and traffic jams more aesthetically pleasing? We have to live with one or the other, and the best choice is clear.

Comfort

Passengers can read or watch TV in privacy during the journey.

Noise

A factor of 100 less noise than automobiles, buses, and trains.

Ease of use

The system is easy and safe enough for children aged 10 to use it without adult help. The handicapped and the elderly will also have less difficulties than with automobiles or conventional mass transit.

Strategic implications

No need for oil.

Pollution

No pollution at the point of use. Electric power plants are getting cleaner with the development of renewable sources and fusion reactors.

Travel time

3-5 times faster than buses. 2-3 times faster than the automobile in rush hour.

Total system cost

Around 4 millions of €/ \$ per km of track - 3 times cheaper than light rail. This is for a 3 passenger PRT system being mass produced. The cost of a 1 passenger PRT system would be half of this. The later is an attractive alternative as the average automobile ridership is 1.2 persons per vehicle. Initial prototype systems will be 3 - 4 times more expensive.

Land use

No need for parking lots. 0.02% of land use compared to 30% for the automobile. One post every 30 m compared to the space taken up by 2 asphalt lanes.

It took more than a century from the invention of the automobile to its wide spread commercialisation. Nobody started series production of automobiles until many early designs had been tested. After more than 30 years of testing, PRT is nearly ready. Many PRT testing facilities were built 20 - 30 years ago. Computers and wireless communications were very primitive 20 years ago. Linear electric motors and composite materials have also improved significantly. All these technologies had to mature to make PRT viable. Some people in the rail industry have seen PRT as a threat, and have very aggressively lobbied against it.

A system which should have been the first PRT system offering service to the public (the Morgantown PRT) was forced by the US Urban Mass Transportation Administration to increase the planned headway by a factor of 10, therefore forcing the use of 10 times larger vehicles. The Morgantown "PRT" functions satisfactorily, but it stopped being true PRT after the UMTA intervened. One of the most recent systems was built by Raytheon for the Chicago Regional Transportation Authority. The CRTA forced changes in the initial vehicle design that resulted in a doubling of the vehicle weight and length. Raytheon management also forced the use of sections of oil pipeline manufactured by the company as the basic structural element of the guideway. All of this contributed to increase the cost of the system. Nevertheless a large testing track and vehicles were built and the concept was successfully demonstrated. No major technical difficulties were found.

The difficulties of PRT

There are no major technical problems with PRT, but its social, economic and political implications are too great to predict. CCTV surveillance and user identification at the entrance might be necessary to avoid vandalism and littering inside the vehicles. Splitting a PRT network or vehicle fleet between competing operators would be grossly inefficient. Each network should ideally be operated by a single PRT operator in competition with bus and rail operators. PRT operators might become monopolistic monster corporations (if private). Simulations show that 30% of the vehicles need to return empty from areas of low demand to areas of high demand. But buses, trains and taxis also often run empty. This problem can be alleviated with better urban planning. Some people will object to the aesthetics of PRT systems. Asphalt and railways have more visual impact, but people are already used to them.

How not to do PRT

Vehicles with passenger capacity above 3. Vehicles heavier than 600 kg. Guideways wider than 1 meter.

Snow collecting guideways. Making the vehicles energetically autonomous with large on board batteries.

Out-board switching. Suspended (rather than supported) vehicles. Using expensive technologies such as magnetic levitation or air cushions. A common mistake is to try to make the vehicles capable of moving both on the guideways and on the streets (this is called dual mode). This inevitably results in heavier vehicles and consequently heavier, larger guideways, dramatically increasing the cost per passenger km.

Features of Military Langar Coach

- ❖ Two large kitchens.
- ❖ Diesel Generator set - 75 kVA with acoustic insulation.
- To feed power to the kitchen equipment when stationary.
- To feed essential loads in the adjacent AC coach. Whenever kitchen is not functional, adjacent AC coach can be operated at full load.
- ❖ Two store rooms & Gas room.
- ❖ One WC toilet with bio-retention tank.
- ❖ 4 ft-wide windows.
- ❖ Each kitchen has two windows for food distribution.
- ❖ 3 Doors aside, two of 920mm wide and one of 1000mm wide.
- ❖ Total water storage capacity – 4390 Litres.
- 2 x 680 litres underslung water tanks.
- 6 x 455 litres overhead water tanks.
- 1 x 300 litres overhead water tank for drinking water.
- Water taps outside the coach on both sides for drinking water.
- Hand pump for raising water in case of emergency.
- ❖ 2 x 25 kW bogie mounted alternators.
- ❖ LED lights.
- ❖ BLDC fans.
- ❖ 1100Ah VRLA battery box.
- ❖ Pre-cooling sockets at both end walls.
- ❖ Inter-vehicle coupler at both ends for feeding power supply.
- ❖ Emergency feed terminal (EFT) at both ends for extending/receiving DC power.
- ❖ 400 Litres under slung fuel tank for DG set.

Salient features of each Langar Kitchen

- ❖ Four gas burners
- ❖ Chimney for smoke exhaust
- ❖ Gas operated water boiler
- ❖ Atta Kneader
- ❖ Utensil washer
- ❖ Deep freezer
- ❖ Three door refrigerator
- ❖ RO plant for drinking water
- ❖ Hot case
- ❖ Ice box
- ❖ Fly catcher
- ❖ Distribution table
- ❖ Cutting table
- ❖ Wash pit
- ❖ Hand pump
- ❖ Two Exhaust fans
- ❖ Two folding berths
- ❖ Two mobile charging sockets
- ❖ Two fire extinguishers.