

Engineering Newsletter 07

MOMENTS

December 2004



Happy New Year 2005 !!

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Civil Engineers
Ministry of Public Infrastructure and Land Transport

MOMENTS has this month crossed the critical value of half a dozen issues, and the mood is back again for hard work and togetherness.

December is generally a "relaxed" month, when the mind is more focussed on forthcoming Christmas and New Year festivities, but this time around, things were slightly different. Many projects were to be completed at very short notice, bringing stress and morosity among (some) members of the Civil Engineering Section.

With the forthcoming UN SIDS conference in Mauritius in January 2005, MOMENTS has this month decided to present the venue for this conference under its CONCEPT heading. Credit to Trainee Engineer Niresh Ramsahye for his relentless work to compile information about this new structure.

As each end of year brings about moments of retrospection, we are including an article about the contribution of the Civil Engineering Section in some of the Education Projects for this year, with limelight on the achievement and number of such buildings designed and whose construction were successfully supervised. This will form the core of our LOCAL NEWS this month.

We also welcome the contribution from Dr. Nishant Shrivastava, who has chosen to present the history of cement and concrete under the CONCEPTS heading.

On the HOT SPOT front, the Team members found the original article too HOT for this festive month, and a fresh topic was selected which is more in tune with the magic of the moment. Hopefully, it will be as well read as the previous ones.

Credit also to some of the younger and "junior" Engineers who took it on themselves to organise a familial diner to celebrate the end of this year of hard work. At the centre page, glimpses of this diner... as usual, absentees were losers. Photos are courtesy of Norbert Seevathean (hence his absence from the photos).

Happy Reading... and from the MOMENTS TEAM:

Belated Merry Christmas and A Very Happy New Year 2005 !

The harder I work, the luckier I get.

Samuel Goldwyn

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Education Projects: An Overview



The adoption and implementation of the reform in the education system lead to an increase in demand of buildings to properly carry out this change. These buildings being not available, the reform then lead to the need for the construction of separate infrastructure for the students from Form I – V and of Form VI. Each section of the Ministry of Public Infrastructure was involved in various ways in this tremendous challenge put forward by the Ministry of Education and Scientific Research.

Along with the construction of new buildings, the reform plan also included the conversion, extension and upgrading of the existing state secondary school to cater to the intake of the students. This situation applies to education infrastructure of both Mauritius and Rodrigues.

Since mid 2001 our Ministry had been busy dealing with the different stages for the start of each school project. The Architect Section was first involved in the preparation of the site plan of each school project after having obtained the exact location earmarked for the new infrastructure. The aim was to advise the Client Ministry of the type of buildings to be used and their exact locations to have optimum and appropriate

schema for the proper function of the schools.

After approval of the Client Ministry, the site plans were then forwarded to the Civil Engineering Section for the structural and infrastructural design stage of the buildings . A typical site plan for a state secondary school consists of:

- Classroom blocks
- An administration block
- A science/computer block
- A workshop/home economic block
- Toilet blocks
- Covered passages linking all the blocks
- Site works comprising of ramps, steps, flower boxes, sitting areas, boundary walls, different playgrounds etc.

The structural design of each new school building involves a lot of hard work for the design section and a special team of about 8 Engineers had to work full time on these projects. As each site for the construction differs by the topography and the site conditions (eg. type of soil), each school project had to be treated as a new project altogether and on a stand alone basis, even though their architectural aspects were of types already used elsewhere. For example, the construction of a new state secondary school at Col-line Monneron was one of the most challenging projects for the design team. The soil conditions there were such that the foundation of each building had to be at least three metres deep. Another example of the difficulty in the structural design was that of the construction of the state secondary school at Phoenix. One of the major design parameters to be taken into consideration for this one was the fact that part of the site was an old dumping site.

The structural design complete with all the structural drawings were sent to the Quantity Surveyor Section for the financial analysis of the project to get the estimated cost for the construction of the new colleges.

LOCAL NEWS

Education Projects: An Overview

After award of the project to the Contractors, the involvement of each section of our Ministry was then required for the proper site management, supervision of works and financial control of the project.

The cost of each project varies mainly depending on the site topography of the land allocated for the construction. The type of soil also plays an important role in the cost implication of the construction of the colleges. The cost of a construction of a new state secondary school averages some Rs. 75M.

From mid 2001 to the end of 2002 some 10 state secondary school were already designed and completed. After this period decisions were taken to construct these schools in different phases so as to simultaneously accommodate the intake of students for the new academic year in the different schools. The phasing process of each school was then completed at a later stage.

A summary of the contract prices for the various buildings is as shown in the tables below:

Construction of new SSS Form I – V

| Sr No | State Secondary School Form I - V | Contract Price Rs. Millions |
|-------|-----------------------------------|-----------------------------|
| 1 | Phoenix | 73 |
| 2 | Palma | 69 |
| 3 | Sodnac Phoenix | 69 |
| 4 | Bell Village | 77 |
| 5 | Mapou | 77 |
| 6 | La Gaulette | 75 |
| 7 | La Cure | 83 |
| 8 | Riviere du Rempart | 69 |
| 9 | Quartier Militaire | 76 |
| 10 | Le Chou, Rodrigues | 53 |
| 11 | Mont Lubin, Rodrigues | 157 |

Construction of new SSS Form I – V (Phasing)

| Sr No | State Secondary School Form I - V | Contract Price Rs. Millions |
|-------|-----------------------------------|-----------------------------|
| 1 | Belle Rose Q-Bornes | 109 |
| 2 | MGSS Flacq | 68 |
| 3 | Forest Side | 118 |
| 4 | Holyrood Vacoas | 23 |
| 5 | MGSS Solferino | 45 |
| 6 | Ebene II | 24 |
| 7 | Moka | 29 |
| 8 | Colline Monneron | 31 |
| 9 | Ebene I | 27 |
| 10 | Vacoas | 27 |

Conversion and Extension of SSS Form I – V

| Sr No | State Secondary School Form I - V | Contract Price Rs. Millions |
|-------|-----------------------------------|-----------------------------|
| 1 | Bambous | 50 |
| 2 | Triolet | 54 |
| 3 | Icery | 63 |
| 4 | St Aubin | 70 |
| 5 | Pailles, Terre Rouge, Sebastopol | 61 |

Construction of new Form V Colleges

| Sr No | Form V College | Contract Price Rs. Millions |
|-------|-----------------------|-----------------------------|
| 1 | Bon Accueil | 88 |
| 2 | Piton | 85 |
| 3 | Riviere des Anguilles | 110 |
| 4 | Colline Monneron | 117 |
| 5 | Nouvelle France | 97 |
| 6 | Camp de Masque | 140 |

After the SSS, the Civil Engineering Section is currently working on the construction of school labs for primary schools in view of the implementation of the School IT projects. More on these later on...

Timeline—History of cement (and Concrete)

A chronological sequence of the history of Cement (and concrete)

12,000,000 BC- Reactions between limestone and oil shale during spontaneous combustion occurred in Israel to form a natural deposit of cement compounds. The deposits were characterized by Israeli geologists in the 1960's and 70's.

3000BC Egyptians-Used mud mixed with straw to bind dried bricks. They also used gypsum mortars and mortars of lime in the pyramids.

Chinese- Used cementitious materials to hold bamboo together in their boats and in the Great Wall.

800 BC Greeks, Crete & Cyprus—Used lime mortars which were much harder than later Roman mortars.

300 BC—Babylonians & As Syrians Used bitumen to bind stones and bricks.

300 BC - 476 AD Romans—Used pozzolan cement from Pozzuoli, Italy near Mt. Vesuvius to build the Appian Way, Roman baths, the Coliseum and Pantheon in Rome, and the Pont du Gard aqueduct in south France. They used lime as a cementitious material. Pliny reported a mortar mixture of 1 part lime to 4 parts sand. Vitruvius reported a 2 parts pozzolan to 1 part lime. Animal fat, milk, and blood were used as admixtures (substances added to cement to increase the properties.) *These structures still exist today!*

1200 - 1500—The Middle Ages—The quality of cementing materials deteriorated. The use of burning lime and pozzolan (admixture) was lost, but reintroduced in the 1300's.

1678—Joseph Moxon wrote about a hidden fire in heated lime that appears upon the addition of water.

1779—Bry Higgins was issued a patent for hydraulic cement (stucco) for exterior plastering use.

1780—Bry Higgins published "Experiments and Observations Made With the View of Improving the Art of Composing and Applying Calcareous Cements and of Preparing Quicklime."

1793—John Smeaton found that the calcination of limestone containing clay gave a lime which hardened under water (hydraulic lime). He

used hydraulic lime to rebuild Eddystone Lighthouse in Cornwall, England which he had been commissioned to build in 1756, but had first to invent a material that would not be affected by water. He wrote a book about his work.

1796—James Parker from England patented a natural hydraulic cement by calcining nodules of impure limestone containing clay, called Parker's Cement or Roman Cement.

1802—In France, a similar Roman Cement process was used.

1810—Edgar Dobbs received a patent for hydraulic mortars, stucco, and plaster, although they were of poor quality due to lack of kiln precautions.

1812 -1813—Louis Vicat of France prepared artificial hydraulic lime by calcining synthetic mixtures of limestone and clay.

1818—Maurice St. Leger was issued patents for hydraulic cement. Natural Cement was produced in the USA. Natural cement is limestone that naturally has the appropriate amounts of clay to make the same type of concrete as John Smeaton discovered.

1820 - 1821—John Tickell and Abraham Chambers were issued more hydraulic cement patents.

1822—James Frost of England prepared artificial hydraulic lime like Vicat's and called it British Cement.

1824—Joseph Aspdin of England invented portland cement by burning finely ground chalk with finely divided clay in a lime kiln until carbon dioxide was driven off. The sintered product was then ground and he called it portland cement named after the high quality building stones quarried at Portland, England.

1828—I. K. Brunel is credited with the first engineering application of portland cement, which was used to fill a breach in the Thames Tunnel.

1830—The first production of lime and hydraulic cement took place in Canada.

1836 The first systematic tests of tensile and compressive strength took place in Germany.

Continued on page 6

ASPECTS

Timeline—History of cement (and Concrete) - continued

1843—J. M. Mauder, Son & Co. were licensed to produce patented portland cement.

1845—Isaac Johnson claims to have burned the raw materials of portland cement to clinkering temperatures.

1849—Pettenkofer & Fuches performed the first accurate chemical analysis of portland cement.

1860—The beginning of the era of portland cements of modern composition.

1862—Blake Stonebreaker of England introduced the jaw breakers to crush clinkers.

1867—Joseph Monier of France reinforced William Wand's (USA) flower pots with wire ushering in the idea of iron reinforcing bars (re-bar).

1871—David Saylor was issued the first American patent for portland cement. He showed the **importance** of true clinkering.

1880—J. Grant of England show the importance of using the hardest and densest portions of the clinker. Key ingredients were being chemically analyzed.

1886—The first rotary kiln was introduced in England to replace the vertical shaft kilns.

1887—Henri Le Chatelier of France established oxide ratios to prepare the proper amount of lime to produce portland cement. He named the components: Alite (tricalcium silicate), Belite (dicalcium silicate), and Celite (tetracalcium aluminoferrite). He proposed that hardening is caused by the formation of crystalline products of the reaction between cement and water.

1889—The first concrete reinforced bridge is built.

1890—The addition of gypsum when grinding clinker to act as a retardant to the setting of concrete was introduced in the USA. Vertical shaft kilns were replaced with rotary kilns and ball mills were used for grinding cement.

1891—George Bartholomew placed the first concrete street in the USA in Bellefontaine, OH. *It still exists today!*

1893—William Michaelis claimed that hydrated metasilicates form a gelatinous mass (gel) that dehydrates over time to harden.

1900—Basic cement tests were standardized.

1903—The first concrete high rise was built in Cincinnati, OH.

1908—Thomas Edison built cheap, cozy concrete houses in Union, NJ. *They still exist today!*

1909—Thomas Edison was issued a patent for rotary kilns.

1929—Dr. Linus Pauling of the USA formulated a set of principles for the structures of complex silicates.

1930—Air entraining agents were introduced to improve concrete's resistance to freeze/thaw damage.

1936—The first major concrete dams, Hoover Dam and Grand Coulee Dam, were built. *They still exist today!*

1956—U.S. Congress annexed the Federal Interstate Highway Act.

1967—First concrete domed sport structure, the Assembly Hall, was constructed at The University of Illinois, at Urbana-Champaign.

1970's—Fiber reinforcement in concrete was introduced.

1975—CN Tower in Toronto, Canada, the tallest slip-form building, was constructed.

Water Tower Place in Chicago, Illinois, the tallest building was constructed.

1980's—Superplasticizers were introduced as admixtures.

1985—Silica fume was introduced as a pozzolanic additive.

The "highest strength" concrete was used in building the Union Plaza constructed in Seattle, Washington.

1992—The tallest reinforced concrete building in the world was constructed at 311 S. Wacker Dr., Chicago, Illinois.

Sources: various

Innovative Civil Engineering Structures: The Pailles Conference Centre



The Pailles International Conference Centre is, after the Cyber Tour at Ebene, another state-of-the-art building in the Mauritian scenery.

The Conference Centre will be the venue for hosting the Meeting on Small Islands Development States being convened by the United Nations in January 2005. The Convention Centre is being constructed by the Indian companies M/s Larsen & Toubro and is equipped with the very latest facilities. The Plenary Hall has a seating capacity of 2,500 persons and standing capacity of 8,000 persons. The Centre would also have conference rooms, an atrium, a conference hall, an amphitheatre and a VIP lounge.

STRUCTURAL SYSTEM

The Conference Centre is a Reinforced concrete framed structure with an amphitheatre, a conference hall and other service facilities. The main conference hall has a clear column free space of 50 m x 70 m with a clear height of 15.5 m. The frame in the main hall has a span of 50.5 m with a total column height of around 25 m. The roof of the conference center is made of structural steel frame covered by profiled sheeting. The roof structure consists of five steel truss segments bolted with each other to form the whole roof structure which is connected horizontally and vertically by tie rods. The flooring of the conference hall is designed as a structural slab capable of withstanding vehicular movements viz forklifts etc. The building rest on isolated footings around 6 m

below ground level.

The Site

The site measures some 260m X 150m with green space area of around 80m X 150m; the main building itself is around 9350 m². The frontage of the site is covered with lush green lawn with water fountains and pathways, which makes the whole surrounding aesthetically very pleasant. There are two roads giving access to the car parking which can accommodate around 500 cars and a few coaches.

The site is covered on all sides with service road finished with interlocking blocks of 80 mm thick laid over consolidated sand filling. There are other service buildings like two security cabins, one sewage treatment plant, one electric sub station, compound wall, main gate and fencing all around the site on the rear side. There is one side gate as emergency exit to the side service road.

Exhibition Centre

The First Level – partly underground

The exhibition center is designed in 3 floors. The lower level or the first level is designed to accommodate all service facilities. The total built up area of this level is 930 sqm and it consists of A.C.Plant room, electrical panel room, pump rooms for domestic and fire water supply, a small mess with locker and hand wash facility, first aid room, police room and one CCTV control room. The ramp from ground level, one staircase and a lift gives direct access to this level.

The Second Level

The second level of the building is kept at 4 m above ground level to prevent any risk of flood. The building has a very imposing façade with galvanized aluminum sheet roofing. RC ribs are provided on either side of building at approx 8.4 m interval to increase the aesthetic appeal.

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End of Year 2004...

Glimpses of a nice time together..

(Photos by Norbert Seevathean)



.. some of the better halves...



End of Year 2004...

Glimpses of a nice time together...



The Permanent Secretary
addressing those present



The Family Photo

MILESTONE

Farewell...

Another special farewell this month to another one of our Trainee Engineers, and also a very special friend of MOMENTS. The Team takes time this month to express its best wishes for a prosperous career and future to

Mrs. Nalini Mahadova-Jhowry

This young woman joined us in January 2003 with a view of completing her professional training for obtaining her registration with the Council of Registered Professional Engineers of Mauritius

During her traineeship, Nalini has always been consistent in her work, always produced good results and has always been eager to learn.

Nalini has also been a founder member of

MOMENTS and her contribution and participation to this Newsletter will remain forever in our mind and heart.



From the MOMENTS Team and in the name of the Civil Engineering Section:

“Best of Luck in your life and career as a Professional Engineer !”

Party time !

Civil Engineering Barbeque Party ...

The customary CES End of Year Barbeque party was finally held on 17 December 2004.

As usual, the Chefs were exemplary and the food was wonderful ! Miam miam ... Absentees were losers again ! :-)

This year's party was enhanced by a master chef who came all the way from Tranquebar specially for the occasion.

The presence of some senior members of the Civil Engineering Section created a warm feeling in our heart that the generation gap is slowly getting bridged. Hurrah !!

When is the next party please?

January B'Day Boys



Kiran Bhujun



Navind Ujoodha



Naim Earally

To all my friends...

One of my “sentimental” poems, dedicated to all those who have one way or another shared and been part of my life; for all the times I forgot to say how much I appreciate you and your comforting presence.

She came in at the turn of a year,
Shy and quiet,
Looking embarrassed and all...
Sitting and communicating timidly,
Almost inaudibly.
You'll feel....such a transparent person!

And then...

And then...

And then, she suddenly went away,
And I realize the void left...
And I felt lonely and sad...

And I felt depressed...

And I felt helpless...

Realizing that only sweet memories are now left...

Realizing that time had not been used enough

to express my happiness and appreciation and pleasure to be together;

Realizing that she is somehow gone now...

Leaving footprints behind...

Deep and burning footprints in my heart...

Kiran BHUJUN

* fictitious person... A “**She**” sounded much better than a “**He**” in this poem 😊

Office Tips: Party Time

It is that time of year again when the office Holiday party comes around. Let us all be warned again about the downfalls of drinking too much at the event.



We have all probably seen, been a part of or perhaps have been the main actor in an office party embarrassing moment; there are ways to avoid having them happen

again or at least limit the potential damage if they do. As alcohol is largely to blame, the most obvious is don't drink at all, but it's hard to stand to temptation. Accept that you are going to get at least a little merry so space the drinks out.

If the party is a long lunch, determine to leave the restaurant sober. If you are already tipsy by the time the main course is on, switch to soft drinks or water, if you are drunk already don't go on, go home. If it is at evening do not get drunk at dinner or turn up tipsy and drink lots of water throughout.

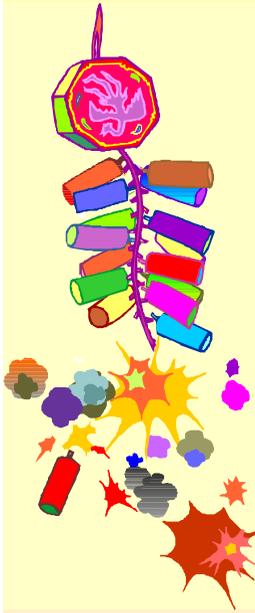
If you end up drunk anyway, avoid people you don't like or have any unresolved issues with, that way you are far less likely to start a fight with anyone. Stop drinking as soon as you realize you are drunk and if you are still out of it after two rounds of water, call a taxi. If you start to feel more sober, carry on drinking water.

If you wake up the following morning knowing that you humiliated yourself but unsure as to how, ask one person you trust to give you an honest answer. Don't ask loads of people. Apologize if you feel the need to, but don't go overboard. Self-flagellation is embarrassing; self-deprecating humor is much more appropriate for the inevitable party post-mortem.

If you got into an argument or insulted someone, seek them out as soon as you get into the office and apologize unreservedly for being a drunken idiot, even if you meant every syllable of the character assassination you gave them, say that it was the booze talking and that you are sorry. You have to work with them, after all. Everyone has got drunk and acted like an idiot at some point and few people will bear a grudge if you act like a grown up afterwards.

Sources: Various

Carols, New Year Resolutions and Our Magic



On general demand, this month's HOT SPOT will try to be less stingy... to match the general festive mood of the end of year.

Christmas and New Year celebrations always bring in some special feelings, when people let their hair down, climb down their high horses and generally have fun and enjoy. Christmas is the time to share, to dream and get intoxicated by the smell of

fresh pine trees and that of new balloons along with the squeal and giggles of children running around.

New Year is also when it is time to wipe out our slate and start fresh, a time when we can sit down two minutes and meditate on the past year and see what went wrong and try to make amends for the future. Many list those amendments down and write their New Year Resolutions. While many of us too may be doing the same for their personal life, how many of us will also do so for their professional life. And by extension, we at the Civil Engineering Section, should we have a common New Year Resolution List?

Christmas and New Year bring in those special moments which can only be match once a year, when the food is better, the smile contagious and the gifts abundant... legitimate gifts... not those obtained from

corruption or pressure on Contractors saying "give me this or your payment will be delayed..." Oops...Sorry... Old HOT SPOT habits.

But whatever the feelings and intentions, the end of year period is always one which is magic. Talking of magic, reminds me that we too at the Civil Engineering Section, are slowly being thought of as great magicians... Hurrah.... Oh? How are we magicians? Let me explain.

The latest "current" practice at the Civil Engineering Section is to obtain requests for projects for which the completion date has already been fixed... nothing wrong in that, except that the requests are being received 3-4 weeks prior to that completion date... and the works normally cannot be completed before 10-12 weeks... so how do we complete the projects on time without being termed as "saboteurs", etc... simple.. MAGIC!! Is building construction a Lego game?

It is a fact that some concrete members can not be stripped of their formwork/props before a set period of time (when making use of Ordinary Portland Cement) this value is usually 21 days for beams, 2 days for unloaded columns and 10 days for slabs.... So, how can it be practically possible to complete, say, a school building project within 4-5 weeks?? It is felt that what is really required is planning, or rather PLANNING. All stake holders must realize the practicalities of their requests and see the technical aspect of the work. All work could be completed in the shortest time possible, but then, that might be at the expense of quality of work, or worse...safety and security...

Continued on next page

HOT SPOT

Carols, New Year Resolutions and Our Magic

Why hurry and remove formwork within a few days of casting to complete a project, and then the building suddenly collapsing and injure many innocent people? If we go according to the pressure being put on us, projects should get over as fast as possible, but will it be professionally ok to allow unsafe or unwarranted methods of constructions? Will that be value for money? And will we Engineers not be blamed for professional fault later on? Magic... eh?

With the coming new year, let us wish that 2005 will bring some planning in the projects initiated by the decision-makers... let us wish that we will not be clamped by last minute decision, when Engineers, and Contractors, will be given a forth-night to carry out works requiring one month.. the implications? Increased pressure and risk of mistake from the Engineer, and increased cost from the Contractor...

The examples are numerous, but will not be mentioned here. Those initiated in the process will recognize them... A recent famous magical moment: the Letter of Intent for a project was sent on 10 December 2004, the expected work duration is 1 month but the project completion date was fixed for 20 December 2004... Magic...?!

With the coming New Year, let us all sit down and make a New Year Resolution list, and let us try to stick to it for the whole of 2005 at least... As an aide-memoire, HOT SPOT is proposing a list of a few items which could be included therein:

1. Let's have a common guidelines, so that all Engineers approve works on site in a similar way
2. let's have strict rules so that Contractors know where they stand and how to behave with Engi-

neers

3. Let's raise our standard so that nobody can say "Ah... this guy will do it for you if you give him Rs"
4. Let's all stand together and propose alternative solutions to problems instead of sticking to only one solution
5. Let's help the decision makers by giving them a draft plan and making them realize that time may soon be too short for some expected work...As a recurrent example, the infrastructural works required at Grand Bassin before the Maha Shivaratree Festival. How many times have Engineers been pressured to complete works which could have been done better with a little planning and advance notification of the requirement instead of last minute decisions...?
6. Let's decide to point out those (very) few who by their corrupt behaviours are bringing ill-fame to the profession...
7. Let's ... let me end up here and allow you to make your own list....

Belated Merry Christmas and Happy New Year 2005!



CONCEPTS (continued)

Innovative Civil Engineering Structures: The Pailles Conference Centre



The entrance atrium have double height roofing and at the entry the main entrance is provided with two doors of 3.6 m wide automatic sliding doors with sensor operated fully

glazed with aluminium frames. The total carpet area of the atrium is 1680 m² and the flooring is finished with polished granite.

The convention hall is of size 50 m x 70 m approximately to accommodate 2500 people seating or 8000 people standing. The hall has a clear height of 15.5 m with galvanized aluminum sheet roofing above. The seating is designed in such a way that 1500 seats are stackable type and 1000 seats are retractable type with motorized arrangement. There is a modular type stage in the front of size around 150 m² with back stage facilities like change rooms, VIP dressing, lockers, technical manager etc. The stage is of 1.8 m height with adjustable

height facility.

The kitchen is designed to prepare food for 700 people capacity, with a total carpet area of the kitchen is 330 m².

There are two meeting rooms – each of size 70 sqm and one office hall of size 140 sqm.

The third level

The third level accommodates one amphitheatre of 450 seat capacity, one VIP lounge of 60 seat capacity, one separate set of toilets for VIP lounge and another set of toilets for amphitheatre. There is also one projector room adjacent to the VIP lounge.

The fourth level

The technical gallery of around 9 numbers is accommodated in the fourth level with complete acoustic facility. The front glazing is with hermetically sealed double glazing with clear float glass.

With this building, Mauritius is now positioning itself in the new market of organization of international conference

LEGAL CORNER



This is one of a series of interactive articles, as experienced by one or some of us at the Civil Engineering Section. We invite readers to participate with their comments and analysis to widen the debate. Note that all dates are for discussion purposes only.

(Possible) Answer to CASE #1:

The Contractor would strictly not be entitled to any extension of time, nor to any claim for loss and Expenses because the contract clearly stipulates the terms and conditions under which works can be suspended on site. The Contractor is not answerable to any other person for the execution of the works other than the Project Manager, in this case the Project Engineer. Moreover, there should really not have been any stoppage of work till 30 November 2004, as mentioned, since the Engineer would have rectified the situation on his next site visit following the fallacious suspension order.

CASE #2:

Works were under way in a high security compound. The Project Engineer was repeatedly not given access to inspect the works by the Client's guards, despite request in that sense to the Client. Meanwhile, the Contractor, having given notice for inspection, continued with the works and reached a very advanced stage by the time the Project Engineer could eventually visit the site. The Contractor subsequently submitted an Application for Payment.

DISCUSSIONS:

Can the Project Engineer withhold payments, on the ground that the works have not been approved?

Send your comments to kbhujun@mail.gov.mu or nsevathean@mail.gov.mu

HUMOUR



KIDS' WORDS :-)

A first grade teacher collected well-known proverbs. She gave each child in her class the first half of a proverb and asked them to come up with the remainder of the proverb. While reading these keep in mind that these are 6-years-old kids, because the answers are quite amazing.

1. Better to be safe than.....punch a bigger boy.
2. Don't bite the hand that.....looks dirty.
3. It's always darkest before.....Daylight Saving Time.
4. A miss is as good as a.....Mr.
5. If you lie down with dogs, you'll.....stink in the morning.
6. Children should be seen and not.....spanked or grounded.
7. If at first you don't succeed..... don't try flying like superman.

8. Don't put off till tomorrow what.....you put on to go to bed.
9. When the blind lead the blind...get out of the way.
10. An idle mind is.....the best way to relax.
11. Laugh and the whole world laughs with you, cry and.....you have to blow your nose.
12. Happy the bride who.....gets all the presents.
13. A penny saved is.....not much.
14. Two's company, three's.....the Musketeers.
15. There are none so blind as.....Stevie Wonder.

And the favorite:

16. Better late than.....pregnant

MOMENTS is now on the web and can be downloaded from our Ministry's web-page web : <http://publicinfrastructure.gov.mu/news.html>

Please use this visit to check out the Civil Engineering Section web-page too...

The Team invites all those interested in submitting articles to **MOMENTS** to do so as soon as possible after the publication of each issue. Please contact any of the Team members for any additional information.

Disclaimer:

*Opinions expressed are those of the respective authors, and are **not**, **IN ANY CASE**, to be taken as those of the Ministry of Public Infrastructure, or of the Government of Mauritius.*



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Articles and any suggestions towards improving the quality of this newsletter are most welcome.

Please direct your comments / letters to

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