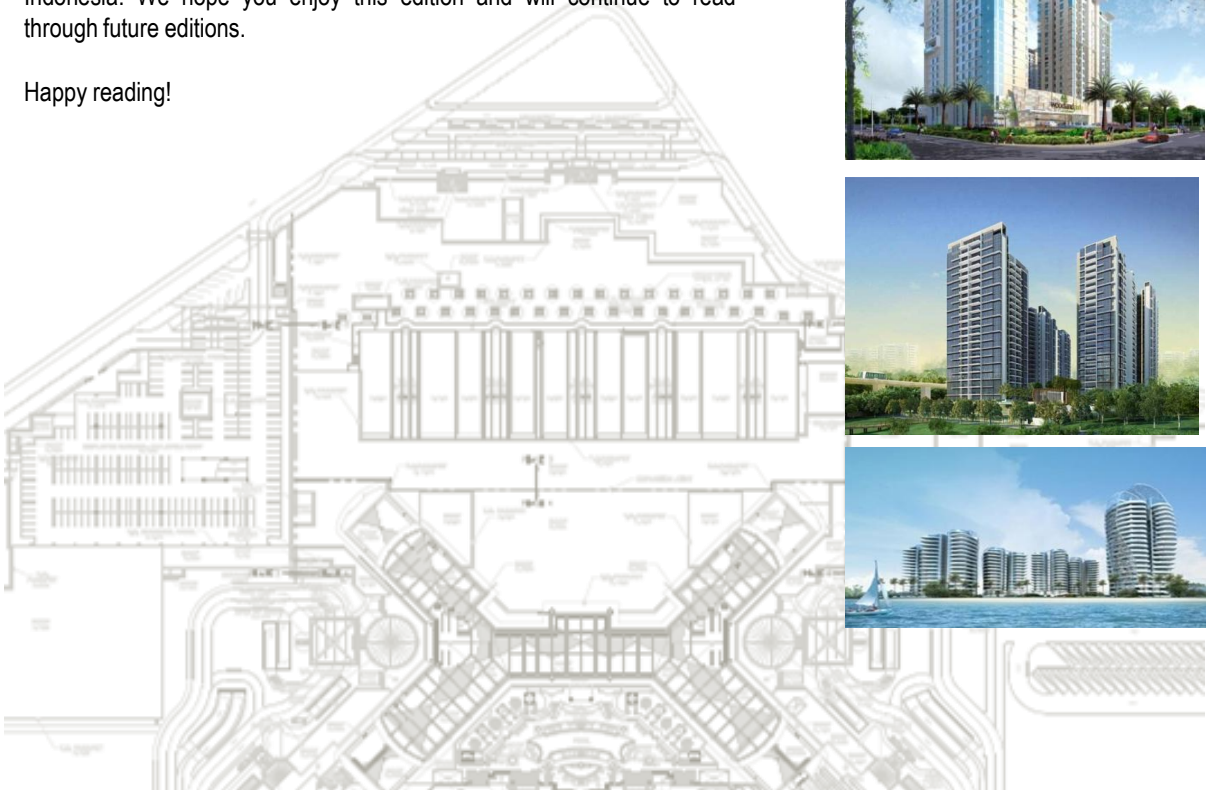


We welcome new and existing readers to the issue of Fast Flow Group Newsletter, Fast Flow Connect Q2/2013. The aim of the newsletter has been to keep Fast Flow's clients more widely interested in some of the latest news and developments in Fast Flow across Asia.

We open Fast Flow Connect Q2/2013 with The Green Building Movement in Indonesia, also included in this section is the GREENRIGHT- Green Building Expo & Conference 2013 in Jakarta followed by the implementation of REVIT MEP (BIM) in Fast Flow Singapore office. Another highlight of this newsletter issue is the basic information about permissible levels of lead in plumbing products and some tips to prevent blocked pipes during construction stage.

Lastly, you will also find our latest completed and newly secured projects in Asia. These are a few of the brave new and noteworthy projects undertaken by our subsidiaries and distributor in Thailand, China and Indonesia. We hope you enjoy this edition and will continue to read through future editions.

Happy reading!



Green Building Movement in Indonesia



Bank Central Asia in Jakarta, Image Source: ANTARA News

Green or sustainable building is the practice of creating and using healthier and more resource-efficient models of construction, renovation, operation, maintenance and demolition. Green building industry is growing very fast nowadays as countries across the world are concerned about high carbon emission, especially in large, fast growing economies.

The Jakarta Building Supervision and Regulation Agency announced that a new green construction code will be incorporated into the permit application process for new high-rise buildings across a broad range of categories. The green building regulations encompasses a total of 10 categories, including power usage, water consumption and rainwater retention scheme. Not many people know that Indonesia has its own green building rating tool called Greenship and so far there are three buildings in Indonesia have acquired Greenship certification. Jakarta is already home to two established buildings which satisfy the new green construction requirements – the Bank Central Asia building and the Sampoerna Strategic Square building, both situated in Central Jakarta. The Dahana Building which is located in West Java acquired the Greenship Platinum for New Building.

Another Event of Green Celebration in Indonesia

Fast Flow's licensed distributor, Siphonic Flow Mandiri (SFM) exhibited at GREENRIGHT- Green Building Expo & Conference 2013 in Jakarta, Indonesia, which took place between 10th and 13th April 2013. The event attracted a total of 200 trade visitors to SFM's booth on the three days of the fair.

The exhibition provides opportunity to show all the environmental friendly products to the people from various backgrounds. It offers the visitors chances to learn and gain the latest knowledge about future market, basic knowledge about future market as well as basic knowledge of green building.



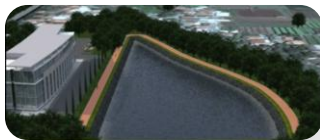
The implementation of green building requirements by Jakarta demonstrates that developing economies are also willing to adopt forceful measures to foster the adoption of sustainability measures in the construction industry.

Jakarta Automated Air Traffic Services

Thanks to our licensed distributor, Siphonic Flow Mandiri; Fast Flow has secured another project in Indonesia, Jakarta Automated Air Traffic Services (JAATS). The project comprises of five buildings with a total roof area of 12184.54 sqm. Both roof and the canopies in each building do not come with a complicated design. However, since the building's structure is almost completed, our team is challenged to install the siphonic system

without causing a major damage in the building's structure and foundation.

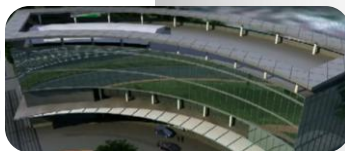
This project allows Fast Flow to showcase one of the benefits in using siphonic system as the project requires rainwater harvesting to be installed in the system. Fast Flow's multiple linking system, the flexibility of Fast Flow's rainwater outlets position and the ability to transport water through long distance without slope have made Fast Flow's siphonic system the ideal transportation tool for rainwater harvesting. With intelligent planning; our customized solutions match the building unique identities.



Gedung Dormitory



Gedung Utilitas



Gedung PPNPI



Gedung Penunjang Operasional

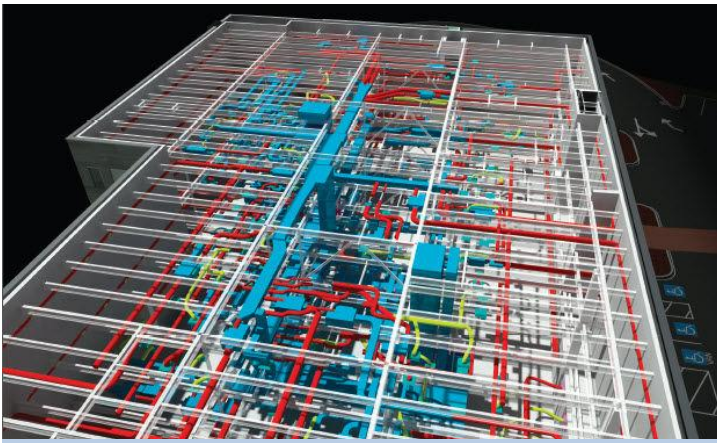
Gedung Operasional



Embracing the Change with BIM

Recently, a quite resolution has been taking place which will fundamentally change the very fabric of the audiovisual design and integration business. This revolution is the increased utilization of Building Information Modeling (BIM). Nowadays, a lot of companies are trying to adopt the best practices in BIM. Singapore's Building and Construction Authority (BCA) has set a target of getting the industry to use BIM widely in 2015. BCA's long-term target is to raise the productivity of the construction sector by up to 25% over the next years and one of the ways to achieve this is through accelerating the widespread adoption of BIM technology.

The hardware investment for BIM may appear as a significant cost. However, we have to bear in mind that BIM and green building are the



BIM software for mechanical, electrical, and plumbing

future of our industry and the users of BIM can reap significant cost benefits that enhance productivity. BIM creates efficiencies – this cutting-edge technology provides multiple simulations of the building at different stages throughout the construction. It is meant to minimize coordination errors with architects and structural engineers so as to detect any clashes in the respective designs before construction, therefore reducing conflicts within the project team and costly changes and delays during construction. This value increases with experience of BIM, offering an opportunity to gain greater returns.

As an industry leader in rainwater management, it is important for Fast Flow to keep up with the newest technological innovation especially in construction industry. Noting that some of our clients required us to use the modeling platform, Fast Flow Singapore office starts to involve with BIM. Fast Flow is currently on an early stage of utilizing the high-tech BIM, Revit MEP application to digitally incorporate all the mechanical, electrical and plumbing drawings in order to recreate building structure facilities.

Being at the forefront of technology, our clients get to benefit from it in the area of productivity and cost effectiveness. By improving communication, visualization and interpretation, we are able to engage our clients in an entirely new experience and appreciation of our work.

Blocked Pipes

Blocked pipe sometimes occur during construction stage. The failure of pipe works to perform as expected may be caused by foreign material such as soil, concrete, sands and other wet work debris build up and become caught between drain pipe and the pipes flow underneath. Blocked pipes can cause water standing, overflow and could also damage the property or other parts of the system, causing great expense.

During construction stage, all pipes should be sealed to prevent foreign objects or debris from entering the pipes. If a blocked pipe found in an exposed installation, the construction workers should be able to overcome it by cutting out the blocked pipe and replace it with a new one. However, the problem will be hard to solve if a blocked pipe found in a cast in reinforced concrete structure (r.c structure). Design for temporary drainage is also important during construction stage, rainwater and other wet work debris will be collected by this temporary drainage system and conveyed to a proper discharge point.

Serious blockage of pipe works



Did You Know?

- **Extracts from Singapore Standard SS 525: 2006 (CP26: 1983 formerly) Code of Practice for Drainage Roofs**
Maintenance of Roof areas:

Periodic Inspection and Cleaning:

"Gutter, rainwater pipes, outlets and gratings should be inspected and thoroughly cleaned once a year, or more often if the building is near an industrial area or is near to trees or may subject to extremes of temperatures."

- **Self-cleansing Effects of Fast Flow Siphonic Roof Drainage System**

• Fast Flow Siphonic Roof Drainage System is a self priming system due to its high velocity flow through pipe works.

• The flow velocity in the pipeworks is normally 1 to 6 m/s. Under such flows, the pipes are flushed through and cleaned.

• However, dumping of debris / cement / sand into the pipeworks will prevent the generation of the minimum flow velocity required to produce the self-cleansing effect of Fast Flow Siphonic Roof Drainage System.

- **Regular Inspections and Maintenance of roof / gutter / outlets**

• Regular inspection must be conducted to ensure no build-up of debris surrounding the outlets.

• The build-up debris will adversely affect the performance and flow capacity of any rainwater discharge, siphonic or conventional.



Permissible Levels of Lead in Plumbing Products

Lead and lead compounds have been used in a wide variety of products found in and around our homes, including paint, ceramic, pipes and plumbing materials, solders, gasoline, batteries, ammunition and cosmetics. Lead can enter drinking water through corrosion of plumbing materials, especially where the water has high acidity or low mineral content that corrodes pipes and fixtures.

Standards amount of lead permissible in plumbing products that come into contact with potable (drinkable) water

PVC pipe can encourage leaching of heavy metals – including lead, especially when home plumbing uses brass fittings and fixtures. The new law reduces the permissible levels of lead in the wetted surface of pipes, pipe fittings, plumbing fittings and fixtures to a weighted average of not more than 0.25%. In addition, the law retains the 0.20% lead limit for solders and flux implemented in 1986 and stipulates a method for calculating the weighted average lead content. Products that meet this standard are referred to in the law as “lead free”

**Lead Free refers to the wetted surface of pipe, fittings and fixtures in potable water systems that have a weighted average lead content $\leq 0.25\%$ per the Safe Drinking Water Act (Sec. 1417) amended 1-4-2011 and other equivalent state regulations.*

$$WLC = \sum_{c=1}^n (LC_c \times \left[\frac{WSA_c}{WSA_t} \right])$$

Formula to Calculate Weighted Average Lead Content

This formation should be used when calculating the weighted average lead content products. Where: WLC = weighted average lead content of a product; LC_c = maximum percentage lead content of a component; WSA_c = wetted surface area of a component, WSA_t = total wetted surface area of all components; n = number of wetted components in a product.

Source: NSF international



Lead is a metal found in natural deposits, is commonly used in household plumbing materials and water service lines.

The permissible levels of lead in the wetted surfaces pipes, pipe fittings, Plumbing fittings and fixtures must not exceed 0.25%

Lead is rarely found in source water, but enters tap water through corrosion of plumbing materials.

China

Recent completed projects:

- 1) Guangzhou New TV Station (20000 sqm)
- 2) New China Shipyard hull comprehensive workshop roof siphonic drainage project (43880 sqm)
- 3) Wuhu otto automation equipment CO. LTD 1 # workshop (56000 sqm)

Newly secured projects:

- 1) Beijing Yizhuang SMIC phase II project (14000 sqm)
- 2) Shenzhen Vanke Plaza shopping center (37544 sqm)
- 3) Chongqing Ford CQ3 workshop (150000 sqm)

Indonesia



Woodlandpark Residence

With the help of our licensed distributor in Indonesia (Siphonic Flow Mandiri), Fast Flow has achieved the privilege to provide rainwater management system to a modern and high-class living residence combined with eco-friendly environment in South Jakarta, Indonesia. Woodlandpark Residence presents five 16-storey towers with a total roof area of 3.946,06 sqm. The project is expected to be completed by early 2014.

Singapore



H2O Residences

Image source: <http://h2oresidences.com/>

Fast Flow recently secured a condominium project at Sengkang West. H2O Residences is an award winning new waterfront condominium developed by City Developments Limited (CDL).



The Pinnacle Collection

Image source:

<http://primesingaporeproperty.com>

Recent completed projects:

- 1) The Pinnacle Collection (2303 sqm)
- 2) P&G Innovation (4250 sqm)
- 3) NUH Medical Centre (7680.31 sqm)

Thailand

Recent completed projects:

- 1) Siamese 39 (1148 sqm)
- 2) The Mark (1480 sqm)



Siamese 39



The Mark

Newly Secured Projects:

- 1) Kerry Logistic (14,002 sqm)
- 2) MK Plant (10,497 sqm)
- 3) MT Aluminium (4,448 sqm)



Fast Flow Technology Engineering Co Ltd
捷流技术工程（广州）有限公司
Guangzhou (China Head Office) 捷流中国总办事处
1st Floor De Yue Building,
Hua Tai Hotel,
No 23, Xian Lie Nan Road
Yue Xiu District, Postal Code 510101,
Guangzhou
广州市越秀区先烈南路23号,
华泰宾馆
得月楼首层, 邮编510101
T: +86 20 8762 0868
F: +86 20 8774 5090

Fast Flow (Thailand) Co. Ltd
Nutri Building, 3rd Floor,
46 Soi Pattanakarn, 20
Suan Luang Bangkok
Thailand 10250
T: +66 2 369 3240-4
F: +66 2 369 3245

Fast Flow Malaysia Sdn Bhd
No. 39, Jalan Pendidik U1/31,
Hicom Glenmarie Industrial Park Phase 1B,
Seksyen U1, 40150 Shah Alam, Selangor Darul
Ehsan
Kuala Lumpur
T: +60 3 5569 1807/ 1821
F: +60 3 5569 1707

Fast Flow Singapore Pte Ltd
No 1 Fifth Avenue, #04-04 Guthrie House
Singapore 268802
T: +65 65004650
F: +65 6500 4665

Above information does not include the addresses of our licensed distributors, please contact us at communications@fastflowgroup.com for further information regarding our distributors in Indonesia, Taiwan and Turkey.