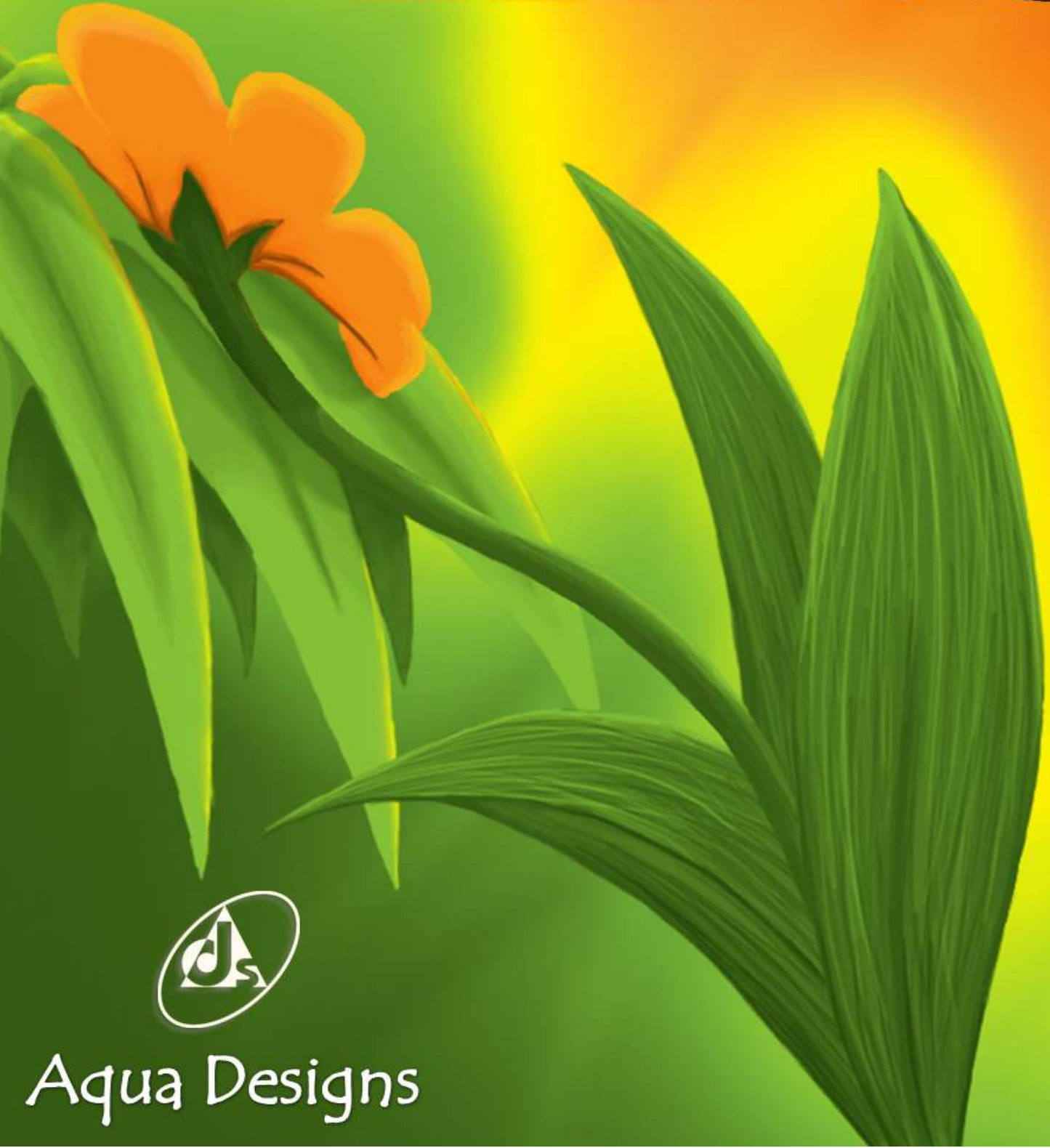


Monthly Magazine
June '07 Edition

AQUA D' EXPRESS



Aqua Designs

MD DESK

Dear All,

As you all are aware, we are coming to the end of the 5th year of Operation & our Anniversary falls on July 15th. Now its time for us to analyse what we have achieved and what we could have achieved. As per me, we have made remarkable improvements with respect to Technology & Customer Satisfaction. Especially in the last one year, our efforts with respect to more focus on Training as yielded its fruits in all fronts. But as you know that "Sky is the Limit" and we need to put in more efforts in order to achieve an unique position in our segment.

This month we have progressed a lot in SAP implementation and my Special Appreciations to Mr.Prabhakar and all of you in fulfilling this task. I expect to go on stream before the end of August. Successful implementation of SAP will streamline more our Purchase & Accounts and the Satisfaction Index of our vendors will improve further.

Let us put in our more efforts on Training for site personnel, as Training is the only Mantra for success.

"A journey of 1000 miles Starts with one step forward "

Regards,



SUTHAKAR

MANAGING DIRECTOR

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Client : Hi – Q Electronics

Organisational News

We touched upon the area of Training & Development, as Training in today's scenario is a challenge as it needs to integrate business and people development. All organizations need to expose their staff to training programs which cater to their current job-related needs. Periodic training programs also help in enhancing the employees' sense of belongingness towards the Management.

Our Director Mr.Parthasarathy imparted In-House Training Programmes for our O&M operators on Water & Waste Water Treatment Process. It's obvious that the operators who attended these programmes have acquired an efficacy to their current job related needs. It has been decided to dedicate every Saturday to have a Training Programme.

As we are going to implement SAP in the month of September, Training sessions were parallelly conducted for the respective Departmental associates on various modules like Purchase, Sales & Marketing, Inventory, Accounts & Commercial Laboratory & O&M. The key improvement expectations out of this endeavor are to improve the Inventory by 15%, Payment Accuracy, Improved financial reporting accuracy and speed, Increased business opportunities by 10%, Cost accuracy resulting in better pricing, MIS speed and accuracy, Improved control over operations, Improvement in Bill of Materials, Exception reporting through alerts, Integrity of data and transactions.

New Projects

Client : BYD Electronics

Project: Sewage Treatment Plant

BYD Company Limited has engaged in two major businesses-IT parts manufacture and automobile Main IT products include rechargeable batteries (Li-ion, NiCd, NiMH), LCD/LCM, plastic housing/tooling, keypad, FPC, camera and vibrator. Auto products consist of high-medium and low-end gasoline cars, ranging from 800cc and 2400cc.

Project: Water Treatment Plant

Over the last 24 years, HI – Q Electronics has emerged as a leading manufacturer of printed circuit boards in India, Established in 1978, the company is committed to excellence steadily updating its facility has been Hi-Q principle ever since its inception, thus maintaining its lead in technology, HI-Q exports PCB's to Belgium, Denmark, Germany, Holland, Israel, Switzerland, Singapore & USA.

Balaji Distilleries

Project: Ultra Filtration Plant

The Chennai Based Balaji Distilleries are the bottlers of Mac Dowells liquor, The division consists of a brewery with installed capacity of half a million hectoliter, which translates into monthly output of five lakh cases of beer.

Completed Projects

Sierra Silk Mills

Sierra Silk Mills Private limited was setup in the 1998 with the main aim of producing high quality furnishing fabrics. They are the leading manufacturer and exporters of furnishing fabrics. Their major clients base in USA, Canada & Europe and now they are looking towards the global market.





smells just like rotten eggs. This can occur when water comes into contact with organic matter or with some minerals, such as pyrite. The situation mostly occurs as ground water filters through organic material or rocks.

(2) Q: Why does it take so long to rinse the soap off my hands?

A: The terms "soft water" and "hard water" are important here. Water is said to be soft if it has a low concentration of calcium and magnesium ions in it, and hard water has a high concentration of calcium and magnesium. If you use soft water, the ions react with the soap you use to produce a residue that feels like it is hard to wash off. If you use hard water, you also will have a harder time working the soap up into a lather. Hard water is prevalent in some parts of the country, and sometimes water-softening chemicals that reduce the amount of calcium and magnesium are added to the water.



View Of Ultra Filtration Plant at Sierra Silk

(3) Q: How does our swimming pool stay so clean?

A: It is not an easy task to keep a swimming pool so clear and clean. If you just set a pan of water outdoors in the middle of summer, you'll see that it ends up containing gunk very quickly. People have to resort to both chemical and physical means to keep the water clean and safe for swimming. The water is continuously pumped through a filter to trap particles, like all those bugs that fall in. To keep algae and dangerous bacteria from growing, chemicals such as chlorine are added. Chlorine also is added to your drinking water to keep those bacteria out of your stomach.

(4) Q: Why is our porcelain sink stained brown?

A: The brown stain is from a large amount of iron in your water. It is closely related to simple rust you see on metal, which is iron oxide. The source of the water you use probably is ground water, and e water has filtered through rocks containing iron-rich minerals on the way to the well.

(5) Q: Why are some lakes I see full of algae and thick plants?

A: First of all, plants naturally grow in and around lakes. Maybe you're asking about a lake that is being choked off by too



PLANS FOR PERSONAL EXCELLENCE

Ten Key Steps Which Provide The foundation For "A Leadership Development Plan"

1. Start Your Day with Intention.
2. Be Dedicated to a high level of learning.
3. Follow a Regular Exercise Routine.
4. Discover Your Strengths.
5. Be an Innovator By Tapping into Your Creativity.
6. Be Willing to Interrupt Your Thought Patterns.
7. Start or Join a Master Mind Group.
8. Don't be a One Trick Pony.
9. Develop the Ability to Fully Express Yourself and be a better communicator.
10. Embrace Change. – BY HR Department

General Knowledge

By Proposal Team

Water Q&A: Chemistry and water – By HR

(1) Q: Why does my water smell like rotten eggs?

A: You would know it if you had this problem! In some parts of the country, drinking water can contain the chemical hydrogen sulfide gas, which

much algae. In many cases, humans are responsible. Actually, these lakes are being fed too much food for plants! There are certain chemicals we use that are nutrients (food) to plants. At our homes we fertilize our yards with nitrogen, potassium, and phosphorus. These chemicals wash off our lawns and eventually get into the water system, such as into creeks, rivers, and lakes. Once there, algae and plants have a feast on this "food." Things used to be worse for our water bodies. Phosphorus used to be an ingredient in our laundry detergent, but this has generally been phased out.

(6) Q: Why does my drinking water look cloudy sometimes?

A: Once in a while you get a glass of water, and it looks cloudy; maybe milky is a better term. After a few seconds it miraculously clears up! The cloudiness is due to tiny air bubbles in the water. Like any bubbles, the air rises to the top of the water and goes into the air, clearing up the water. The water in the pipes coming into your house might be under a bit of pressure, and gases (the air), which are dissolved in the pressurized water, will come out as the water flows into your glass, where is under normal atmospheric pressure.

Do You Know?

Are you aware that only about 2.5 percent of the water on the Earth can be drunk? The balance 97.5 percent is salt water that we cannot use unless it is desalinated. Of the 2.5 percent that we can use, about three-fourths is frozen in the ice caps and glaciers, leaving just one quarter for household use. Fresh water is found in lakes, rivers, streams, underground, and glaciers.

The world is heading towards a freshwater crisis mainly due to its mismanagement. This crisis is already evident in many parts of the world, varying in scale and intensity depending on the time of the year, climate, and location. Another reason for the depletion of freshwater resources, particularly groundwater resources, is a rapidly increasing human population. Recognizing the importance of water resources to the planet's future, the United Nations General Assembly proclaimed the year 2003 the International Year of Freshwater.

This will provide an opportunity to raise awareness, motivate people, and mobilize resources in order to manage water in a sustainable way

Water - Essential to Life.

Water is a fundamental part of our lives. It is easy to forget how completely we depend on it. Human survival is dependent on water -- water has been ranked by experts as second only to oxygen as essential for life.

The average adult body is 55 to 75% water. 2/3 of your body weight is water (40 to 50 quarts). A human embryo is more than 80% water. A newborn baby is 74% water. Everyday your body must replace 2 1/2 quarts of water. The Water you drink literally becomes you! Since such a large percentage of our bodies is water, water must obviously figure heavily in how our bodies function. We need lots of fresh water to stay healthy. Aside from aiding in digestion and absorption of food, water regulates body temperature and blood circulation, carries nutrients and oxygen to cells, and removes toxins and other wastes. This "body water" also cushions joints and protects tissues and organs, including the spinal cord, from shock and damage. Conversely, lack of water (dehydration) can be the cause of many ailments. In his book, Dr. Fereydoon Batmanghelidj noted that chronic dehydration may cause certain problems for the body, including hypertension, asthma, allergies, and migraine headaches.

Every process in our body occurs in a water medium. We can exist without food for 2 months or more, but we can only survive for a few days without water.

Most people don't drink enough water. The body responds to this water deficiency in a variety of ways, which we frequently see as illnesses. When, many symptoms decrease. Ongoing dehydration may cause actual disease as the body struggles to maintain itself with insufficient water.



How much water should you drink?

A non active person needs a half ounce of water per pound of body weight per day. That is ten 8 ounce glasses a day if your weight is 160 pounds. For every 25 pounds you exceed your ideal weight, increase it by one 8 ounce glass.



An active, athletic person needs 2/3 ounce per pound which is 13-14 8 ounce glasses a day if you're 160 pounds. The more you exercise the more water you need. Spread out your water intake throughout the day. Do not drink more than 4 glasses within any given hour. After a few weeks your bladder calms down & you will urinate less frequently, but in larger amounts.

Coagulation and Flocculation

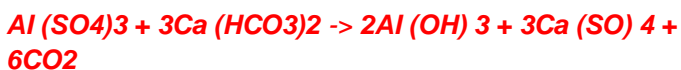
Padmanaban - Sr.Manager – Marketing

Coagulation is the process of removing fine particles from water with the addition of certain chemicals known as coagulants. Coagulants when added to water form an insoluble gelatinous precipitate during its formation and descent through the water, absorbs and entangles very fine suspended impurities, forming bigger flocs. They settle down easily. Thus they remove suspended and colloidal particles quickly and completely.

Chemical Co-agulants

1. Alum [$K_2SO_4Al(SO_4)_3 \cdot 24H_2O$]

Alum reacts in water in the presence of alkalinity. In natural alkalinity is not present, sufficient lime is added



The insoluble aluminium hydroxide forms the floc which adsorbs and entangles the fine suspended and colloidal

impurities. For best result the pH should be between 6.5-8.5

2. Sodium Aluminate ($NaAlO_2$)

This can be used for treating water having no alkalinity ($pH < 7$)



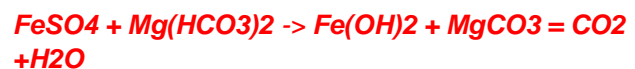
The sodium hydroxide produced precipitates magnesium salts as $Mg(OH)_2$



Thus this decreases magnesium hardness also.

3. Ferrous sulphate [$FeSO_4 \cdot 7H_2O$]

It is also commonly used for coagulation purpose. It gives good result when pH is above 8.5



Ferric hydroxide is in the form of heavy floc which causes quick sedimentation

COMPARISON OF ALUM AND IRON SALT

Alum	Iron salt
pH range 6.5	8.5 Wide range
Impart less corrosive characteristics	Impart more corrosive characteristics
Lesser weight flocs	Heavy weight flocs-easily to settle
Usage of $FeCl_3$	good oxidizing to remove H_2S odour and taste
No staining or ion bacteria's produced	They are produced
Not corrosive and deliquescent	Corrosive and deliquescent in nature

PUZZLE (Using elements)

Arul Raj, *Site In Charge - India Pistons*

1			11		13	☀	2			14
3	☀	☀		12					☀	
4	☀	☀							☀	☀
10					5	19	15	16		
		18				☀				
	9					☀				
6						☀				
7										21
8									20	☀

HINTS:-

LEFT TO RIGHT

- Used in conducting wires.
- Its oxide is called the "rust".
- Powerful reducing agent replacing Si from silica.
- This element free petrol is in usage in recent days. (Letters put in random)
- Diamond is one of the allotrope of this element.
- Occupies 77th position in the periodic table. (Letters put in random)
- Used in nuclear fission reactions. (Letters put in random)
- Element which is extracted from Epsom salt.
- Element with atomic number 68. (Letters put in random)

TOP TO BOTTOM:

- Gives a blue coloured oxidizing and reducing flame.
- Its Oxide is a very good Opacifier.
- One of the rare earths with starting letter T and followed by the 68th element.
- F-block element with symbol Pm.
- One of its well known alloys is "invar".
- An inert gas.
- An inert gas used in night lamps.
- Transition metal with symbol Rh. (Letters put in random)
- The only metal in P-block elements. (Letters put in random)
- A metalloid in P-block, sometimes harmful. (last letter missing, random)

BOTTOM TO TOP:

- Invented by Marie Curie. (Letters put in random)
- An alkaline earth metal. (Letters put in random)
- Valuable metal.
- A rare gas filled in GM tube.
- Element with symbol Ho. (Letters put in random)
- Important for life.



RIGHT TO LEFT

22) Strontium. (Letters put in random)

NOTE:

Some words are ended abruptly not in connection with the adjacent or following words.

LISTEN:

Arrange the following mentioned letters to get something which is related to us.

Find It;

4th letter of top to bottom 1.

3rd letter of top to bottom 13.

1st letter of left to right 6.

1st letter of left to right 4.

New Comers In ADIL



- **J. Saravanan** Executive – Accounts
- **S. Naresh Kumar** Executive – Systems
- **D. Jalendiran** Executive – Purchase
-



Aqua Designs India Limited

Bringing Purity to Your Lifestyle

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