Mips instruction set architecture

Pharmacy Care Wednesday, September 16, 2020 Science Surface Tension is a long style of unity that must work parallel to the surface to compensate for the strength of the internal pull on the liquid. This is because on the surface, the adhesion force between the liquid and the air is smaller than the hohesi force between the liquid molecules causing the inward force to occur on the surface of the liquid. Surface tension is a long force of unity found in the interface of the two phases of liquid, which is not mixed, the surface tension is always less, because the force of adhesion between the two liquids is not mixed more than the adhesion between the liquid and the air. Measuring surface voltage or interface voltage:1. The surface voltage capillary lifting method is measured by looking at the water/liquid level rising through the capillary. The capillary increase method can only be used to measure surface voltages that cannot be used to measure interface voltage. 2. The Du-Nouy thermometer method of Du-Nouy ring method can be used to measure surface voltage or interface voltage. The principle of this tool is the force needed to release a platinum iridium ring dipped on the surface comparable to a surface voltage or interface voltage of a liquid. In general, the surface tension of the liquid is affected by several factors, including temperature and dissolved substances, where the presence of dissolved substances in the liquid will affect the amount of surface tension, especially molecules of substances located on the surface of the liquid in the form of monomolecular layers, called surfactant molecules. The benefits of superficial stress phenomena in pharmaceuticals include the effect on the absorption of drugs in solid auxiliary materials on drugs, the penetration of molecules through biological membranes, the formation and stability of emulsions and the variance of insoluble particles in liquid media to form suspensions of voltage suspensions in previous discussions, we studied the concept of surface voltage qualitatively (without mathematical equation). This time we are considering surface voltage quantitatively to help us reduce the surface voltage equation, we are considering a wire that is bent to form the letter U. Another straight-shaped wire is attached to both legs of the U wire where the straight wire can be moved. If this wire is inserted into the soap solution, then after its removal a layer of soap water will form on the surface of the wire, similar to when you play soap bubbles. Since the straight wire is mobile and the mass is not too large, the soapy layer of water will give the surface a voltage of force on a straight wire so that the straight wire moves upwards. To keep the direct wire stationary or wire in requires the overall strength of strength Down, where the total strength size is F'w'T. In balance, F and surface tension power works on a soapy layer of water on a straight wire. Suppose the length of the direct wire l. Since the layer of soap water that touches the direct wire has two surfaces, the force of surface tension applied by the soap water layer runs along 2l. Surface voltage on the soap layer represents if the comparison between the Force of surface voltage (F) and the length of the surface in which the force works (d). In this case, the surface length is 2l. Mathematically written: 1 ding/cm , 10-3 H/m and 1 m/m Because surface voltage is a comparison between the force of surface voltage and the length of the block, the block of surface voltage is Newton per meter (N/m) or dyne per centimeter (dyn/cm). Bibli: Giancoli, Douglas C., 2001, Physics Volume I (translation), Jakarta : Erlangga Publishers. We've certainly seen a mosquito that can swim above the surface of the water. One example of surface tension is the success of mosquitoes swimming above the surface of the water. The general understanding, what is meant by surface tension is the tense nature of the water surface. Surface tension also affects other physical events, namely capillaries. Understanding according to expertsBabang Haryadi (2009) defines surface tension as a tendency of liquid surfaces to stretch so that it looks like tense (elastic) skin. Surface tension is defined as the strength (F) that each unit of length on the surface of the liquid collides. Dudi Indrajit (2009) defines surface tension as a tendency of liquid surfaces to contract (shrivel). In addition, surface tension can also be interpreted as an effort by each unit of the area. Nurakhmandani Network (2009) defines surface tension as the force of each unit of length. Factors influencing the surface tension of the surface tension of the liquid are very closely related to the tension of the force line, which has the surface of the liquid. This tense force comes from an attractive tense force between similar molecules or the force of attraction of the clutch of liquid molecules. In the image above, the molecule A in the liquid experiences the power of grip with the surrounding molecules on all sides. As a result, molecule A has a result of zero strength or is in balance. As for the B molecules that are on the surface of the liquid only experience the clutch strength of molecules or particles that are below and next to them only. Molecule B has a force of grip downwards, which is not zero. This resulting downward grip force will make the liquid surface as low as possible, so that the surface of the liquid looks tense. This is what is called surface tension. Voltage formula The surface is defined as the size of the force faced by each unit of length on the surface of the liquid. Mathematically worded as follows. Description : F - Power (N)l - Surface length (m)y surface voltage ratio (N/m) Sample Issues and discussions1. The wire is bent like the letter U. Then a small wire of 0.2 grams ab is installed in the wire. Then the wire is dipped in a layer of soap and lifted vertically so that there was one layer of soap. Ab wire is exposed up to pull force. For balance, a small AB wire suspended with a weight of 0.1 grams. If the length of the AB wire is 20 cm and g 9.8 m/s2, then the large surface voltage of the soap layer ... A. 2.94 x 10-3 N/mB. 1.47 x 10-3 N/mC. 2.94 x 10-2 N/m D. 1.47 x 10-2 N/m E. 0.735 x 10-2 N/mSeral :D Know: mk 0.2 grams 0.2 x 10-3 kg mb 0.1 x 10-3 kg 9.8 m/s2l and 2 γ 0 cm . The surface voltage of the soap layer is 0.735 x 10-2 H/m. Correct answer (E). 2. The 24 cm long wire is on the surface of the water with a long, parallel surface. The water surface voltage ratio is 0.073 H/m. Additional force outside the wire weight required for pulling the wire... A. 5.2 x 10-2 N B. 4.7 x 10-2 N C. 3.9 x 10-2 N. D. 3.5 x 10-2 N E. 3.0 x 10-2 NSeverion :D Know: l 24 cm - 24 x 10-2 m.γ - 0.073 N/mItanya : Extra force to draw the wire (F)Answer:F γ . d γ. 2l F 0.073 x 2 x 24 x 10-2 F 0.073 x 48 x 10-2 F 3.5 x 10-2 NSo, additional wire pulling force (F) is 3.5 x 10-2 H. Poll: What's your favorite chocolate? Why do the dots have the shape of a ball? Or have you ever seen a razor blade one day swim on the water? Why would I do that? Physically, this phenomenon can occur due to surface tension. Well, you don't know what surface tension is yet? Let's look at the most comprehensive discussion of surface tension below. Understanding the surface tension of the surface is to force or pull down, leading to the surface of the liquid to the contract and objects in a tense state. This is due to an unbalanced tension on the liquid interface. This usual style is immediately known for increasing the usual liquids in capillary tubes and forming a small drop of liquid. Or surface tension can also be an interesting phenomenon that occurs in fluids that exist in a quiet state (static). The benefits of surface voltage below there are several benefits of surface voltage, namely: In influencing the absorption of the drug in solid supporting materials in the supply of the drug. The penetration of molecules through biological membranes. Formation and stability of emulsion Particles do not dissolve in liquid media to form a finished pendant. The cause of surface voltage is the cause of surface voltage, due to the grip under the liquid, which is larger than the grip on the surface of the liquid. Thus, the surface of the water will usually wrinkle and form the smallest surface area possible. This can prove if the dew points attached to the grass are in the shape of a ball, because the smallest surface area is the assembly of the ball. The amount of surface tension is affected by temperature. Thus, if the higher the temperature of the liquid, the less surface voltage. Meanwhile, if the less surface voltage, the greater or better the water's ability to wet objects. Factors influencing surface stress1. The surface tension temperature decreases with the increase in temperature, due to the increase in kinetic energy of molecules.2. Dissolved substances in the liquid will increase the viscosity of the solution, so the surface tension will increase in size.3 SurfactantSurfaktan is a substance that can activate the surface. Because, it tends to make it focused on the surface. For example: Soap.Equilibrium soap bubbles: Soap bubbles consist of 2 membranes with a spherical surface, with a thin layer of liquid among them. Because of surface tension, membranes tend to shrink in an attempt to reduce their surface area. When the bubble contracts, the air inside is depressed. So increase the pressure on the inside until there is a reduction again. The aforementioned equation is known as Laplace law. Surface voltage running on soap bubbles: a cross-section with 2 thin layer surfaces. Balance half the bubble. Applying surface voltage in everyday life Below there are several applications of surface voltage that exist in everyday life, namely: Laundry soap is intentionally made to reduce the tension of the surface of the water, so that it can improve the ability of water to purify impurities attached to clothing. Washing clothes with warm water or hot water is cleaner, because at high temperature the surface tension will be less, and the water's ability to wet dirty clothes is even greater. Alcohol and antiseptic in general have the ability to kill germs, and have a low surface tension, so it can get wet the entire surface of the skin wound. Ducks and geese can swim and swim above the surface of the water because the feathers are not wet from the water. If the water is mixed with detergent, then the surface tension will decrease, ducks and geese that float the feathers get wet. Thus, ducks and geese can drown. Bubbles produced by soap water are one example of surface tension. Surface voltage of the Surface Formula (gama) is defined as a comparison comparison voltage forces with the length of voltage where it works. Physics Formula: γ - F/d or γ - F/2lBestance:F - Force (N)γ - Surface Voltage (Nm)d - Surface Length (m)Example of liquid surface voltage Gejala - symptoms that can indicate surface tension of liquids as follows: Water insects that can work on the surface of the water. Increase the water restriction on capillary tubes or form foam and waves in soapy water. Water coming out of the pipette is a round drop - a round or razor blade that can float on the surface of the water (placed on the surface of the water carefully - carefully). Determining the surface voltage in the capillary tube As to determine surface tension in the capillary tube, among other things: Samples (e.g. oil) are inserted into glass cups and measured by temperature. Capillary pipes are inserted into glass cups containing samples. The sample will go up to a certain height. The increase in samples in the capillary tube is measured from the surface of the sample in a glass cup. Capylrites are caused by the interaction of molecules - molecules inside liquids. In liquids, molecules can experience adhesion and style cohesion. The force of the clutch is the attraction - interesting between molecules - similar molecules in a liquid matter. Meanwhile, adhesive style pull - interesting between other molecules that are not similar, namely the container material where the substance is looking to be positioned. If the grip is larger than the grip, for example, on oil with the surface of the glass, the oil will interact strongly with the surface of the glass. Thus, the oil moisturies the glass, and the top surface of the liquid will curve (concave). This condition can cause the liquid to rise up the voltage surface, which is upwards until the upper limit of the strength balance with the strength of the liquid's weight is reached. Thus, the oil can rise to the top in a small pipe, commonly called a capillary tube. If the angle of contact between the liquid and the capillary tube is more than 23 degrees, the shape of the surface of the liquid is pressed downwards, called the concave meniscus. The formula/equation calculates the low height or ups and downs of liquid surfaces in capillary tubes: h (2 γ cosO) / (No.g.R)Description:h - Rise/liquidity in the tube (m)γ - Surface voltage (N/m)O - Box angle (degrees) Wire bent, Like the letter U. Then, a small 0.2 gram pq wire is installed in a wire. After that, the wire is dipped in soapy liquid and lifted vertically, so between the wires is a thin layer of soap. When pulling up, a small wire is pulled up by a layer of soap. In order to balance, Pq small wire hang with a weight of 0.1 grams. If the wire is 10 cm long and the gravitational value is 9.8 m/s2. So what is Soap? Answer: Unknown: Wire weight 0.2 grams - 2 x 10-4 kgC wire length - 10 cm, 10-1 mMMM items - 0.1 g, 1 x 10-4 kg of gravity (g) - 9.8 m/s2Italia: Surface tension of soap layer? Answer: F.M. gF 2 x 10-4 kg. 9.8 m/s2FH 2.94 x 10-3 NW, F/d/F/2LS 2.94 x 10-3 / 2 x 10-1 γ 1.47 x 10-2 H/m. Capillar tube with fingers (1 mm) inserted into the water vertically. Water has a density (1 g/cm2) and surface voltage (1 n/m). If, its angle of contact (60 degrees) and its gravitational acceleration (10 m/s2). So calculate the large increase in water level on the wall of the capillary pipe. Answer: Unknown: R 1 mm No 1 x 10-3 m x 1 g/cm2 100 kg/m3 γ 1 H/mO - 60 degrees, 10 m/s2Itanya: h....? Answer: h (2 γ cosO) / (No.g.R)h (2 x cos 60) / (1000 x 10 x 10-3)h - 1/10 - 0.1 m and 10 cm. Thus, the water level on the capillary tube rises above 10 cm cm. mips32 release 2 instruction set architecture. mips instruction set architecture pdf. mips instruction set architecture examples. mips32® architecture for programmers volume ii the mips32® instruction set. characteristics of mips instruction set architecture. the simple datapath for the mips architecture has instruction set of