

"Tasdiqlayman"
"Energetika" kafedrasini mudiri
dos. Jalilov R.B.



"Gidravlika va Issiqlik texnikasi" fanidan testlar

№ 1 Fan bobini-1; Fan bo'limi-1; Qiyinlik darajasi-1

Termodinamik tizimda gazlarning biror holat o'zgarishi sodir bo'lsa buning animasi deb aytiladi

Termodinamik jarayon

Adiabatik jarayon

Termodinamik holat

Izolyatsiyalangan tizim

№ 2 Fan bobini-1; Fan bo'limi-1; Qiyinlik darajasi-1

Agar tizim tashqi muhit bilan issiqlik almashmasa bu-

Adiabatik jarayon

Termodinamik jarayon

Termodinamik tizim

Izotermik jarayon

№ 3 Fan bobini-1; Fan bo'limi-1; Qiyinlik darajasi-1

Izolyatsiyalangan tizim nima

Adiabatik jarayon

Termodinamik jarayon

Izotermik jarayon

Gazlar yoki moddalar parametri o'zgarmasa

№ 4 Fan bobini-1; Fan bo'limi-1; Qiyinlik darajasi-1

Modda massasini intensiv bo'lishi nima

Modda miqdoriga bog'liq bo'lmagan (bosim harorat)

Modda miqdorining o'zgarishi

Modda miqdoriga (hajm massa) bog'liq bo'lgan

№ 5 Fan bobini-1; Fan bo'limi-1; Qiyinlik darajasi-1

Massa xossasi ekstensiv bo'lishi nima

Modda miqdori o'zgarishda bo'lsa

Modda miqdori o'zgarmasa

Modda miqdoriga bog'liq bo'lmasa

Modda parametrlariga bog'liq emas

№ 6 Fan bobini-1; Fan bo'limi-1; Qiyinlik darajasi-1

Gaz bosimi P bilan uning solishtirma hajmi V orasida qanday bog'liqlik bor

$P=1/V$ yoki $V=1/P$

$P=V^2$

$P=1/1+V$

$P=V+V^2$

№ 7 Fan bobini-1; Fan bo'limi-1; Qiyinlik darajasi-1

Modda zichligi va solishtirma zichlik nima

$\rho =M/V$

$S=V/M$

$\rho =M*V$

$\rho =M-V$

№ 8 Fan bobini-1; Fan bo'limi-1; Qiyinlik darajasi-1

Gaz bosimining o'lchov birliklari

Atm, bar, Pa, mm.sim.ust, mm.suv.ust

m/n. atm/m. n/m. kg/sm

GPa. MPa. kPa

$T=0^0$ da 760 mm, sim ust

№ 9 Fan bobini-1; Fan bo'limi-1; Qiyinlik darajasi-1

1 atm bosimi nimaga teng

$$1 \text{ atm} = 1 \text{ kg/sm}^2 = 735,6 \text{ mm, sim ust} = 1000 \text{ mm suv ust} = 98066,5 \text{ N/M}^2$$

$$1 \text{ atm} = 10 \text{ GPa}$$

$$1 \text{ atm} = 101325 \text{ N/M}^2$$

$$1 \text{ atm} = 1 \text{ bar } 10^5 \text{ N/M}^2$$

№ 10 Fan bobii-2; Fan bo'limi-1; Qiyinlik darajasi-1

Bosim birliklari qaysi javobda to'g'ri ko'rsatilgan

Hamma javoblar to'g'ri

$$1 \text{ bar} = 10^5 \text{ n/m}$$

$$1 \text{ atm} = 98066,5 \text{ n/m}^2$$

$$1 \text{ n/m}^2 = 1 \text{ Pa}$$

№ 11 Fan bobii-2; Fan bo'limi-1; Qiyinlik darajasi-1

Normal holat qanday qabul qilingan

$$T = 0^0 \text{ da } 760 \text{ mm, sim ust}$$

$$1 \text{ Pa bosim va } 0^0 \text{C haroratda}$$

$$1 \text{ Pa bosim va } 100^0 \text{C haroratda}$$

$$P = 101325 \text{ N/m}^2 \text{ da}$$

№ 12 Fan bobii-2; Fan bo'limi-1; Qiyinlik darajasi-1

Har qanday gaz 0^0 C harorat va 760 mm sim ust.da qanday hajmni egallaydi

$$V = 22,421 \text{ l}$$

$$V = 101 \text{ l}$$

$$V = 100000 \text{ l}$$

$$V = 1000 \text{ l}$$

№ 13 Fan bobii-2; Fan bo'limi-1; Qiyinlik darajasi-1

Harorat shkalalaridagi Selsiy va Kelvinlar orasidagi munosabatni toping

$$1 \text{ K} = 273 + t$$

$$1 \text{ K} = 273^0 \text{C}$$

$$0^{\circ}\text{K}=0^{\circ}\text{C}$$

$$273^{\circ}\text{K}=100^{\circ}\text{C}$$

№ 14 Fan bobii-2; Fan bo'limi-1; Qiyinlik darajasi-1

Idishda harorati 70°C bo'lgan suyuqlik bor ushbu suyuqlikning haroratini Kelvin va Farangeyt shkalasidagi to'g'ri javobni ko'rsating

$$343^{\circ}\text{K}. 158^{\circ}\text{F}$$

$$343^{\circ}\text{K}. 126^{\circ}\text{F}$$

$$303^{\circ}\text{K}. 158^{\circ}\text{F}$$

$$373^{\circ}\text{K}. 188^{\circ}\text{F}$$

№ 15 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

1 kg jism uchun ideal gazning holat tenglamasini ko'rsating

$$PV=RT$$

$$PV=mRT$$

$$PV=kRT$$

$$PV/R=t$$

№ 16 Fan bobii-1; Fan bo'limi-2; Qiyinlik darajasi-1

Kislородning gaz doimiysini toping (R_{O_2})

$$260 \text{ J}/(\text{kg} \cdot \text{K})$$

$$280 \text{ J}/(\text{kg} \cdot \text{K})$$

$$265 \text{ J}/(\text{kg} \cdot \text{K})$$

$$140 \text{ J}/(\text{kg} \cdot \text{K})$$

№ 17 Fan bobii-1; Fan bo'limi-2; Qiyinlik darajasi-1

Havoning gaz doimiysini toping (R_{havo})

$$287 \text{ J}/(\text{kg} \cdot \text{K})$$

$$281 \text{ J}/(\text{kg} \cdot \text{K})$$

$$265 \text{ J}/(\text{kg} \cdot \text{K})$$

$$240 \text{ J}/(\text{kg} \cdot \text{K})$$

№ 18 Fan bobii-1; Fan bo'limi-2; Qiyinlik darajasi-1

Universal gaz doimiysi $\mu \cdot R$ ni toping

$$\mu \cdot R = 101.8 \text{ J/(kg} \cdot \text{K)}$$

$$\mu \cdot R = 227 \text{ J/(kg} \cdot \text{K)}$$

$$\mu \cdot R = 8314 \text{ J/(kg} \cdot \text{K)}$$

$$\mu \cdot R = 10105 \text{ J/(kg} \cdot \text{K)}$$

№ 19 Fan bob-1; Fan bo'limi-2; Qiyinlik darajasi-1

Mendeleyev-Klapeyron tenglamasini ko'rsating

$$PV = RT$$

$$PV = \text{const}$$

$$P = RT$$

$$PV = T$$

№ 20 Fan bob-1; Fan bo'limi-2; Qiyinlik darajasi-1

Hajmi 60 l harorati 25°C bo'lgan ballondagi kislorodning bosimi 1199.3 kPa kislorodning massasini aniqlang

0,9 kg

1,1 kg

1,6 kg

2,4 kg

№ 21 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-1

Van-der-Vaals tenglamasini yozing

C_3H_8 – gazi uchun gaz doimiysi nimaga teng?

$$\left(P + \frac{a}{V_m^2}\right)(V_m - b) = RT \quad 189$$

$$\left(P + \frac{a}{P_m^2}\right)(P_m - b) = RT \quad 287$$

$$\left(P + \frac{a}{T_m^2}\right)(T_m - b) = RT \quad 260$$

$$\left(P + \frac{a}{V_m^2}\right) = RT$$

№ 22 Fan bob-7; Fan bo'limi-2; Qiyinlik darajasi-1

Gazlarning solishtirma issiqlik sig'imiga to'liq berilgan ta'rifni toping

1 kg jismni 1⁰ga qizdirish uchun zarur bo'lgan issiqlik miqdoriga

Istalagan miqdordagi gazni 1⁰ga qizdirish uchun zarur issiqlikka

1 kg jismni 1⁰ga sovutish uchun zarur bo'lgan issiqlik miqdoriga

O'rta issiqlik sig'imidan farq qiluvchi 1 l gazni 1⁰gamisitish uchun zarur bo'lgan issiqlik miqdoriga

№ 23 Fan bob-7; Fan bo'limi-2; Qiyinlik darajasi-1

Puasson koeffitsiyentini aniqlang

$$C_p/C_v=k$$

$$C=a+b*t$$

$$C_p-C_v=R$$

$$C_p*C_v=kR$$

№ 24 Fan bob-7; Fan bo'limi-2; Qiyinlik darajasi-1

Hajmi 0,9 m³ bo'lgan idishda 1,5 kg CO gazi joylashtirilgan. Ushbu idishdagi gazning zichligi va solishtirma hajmini aniqlang

$$V=0.6 \text{ m}^3, \rho=1.66 \text{ kg/m}^3$$

$$V=0.65 \text{ m}^3, \rho=1.5 \text{ kg/m}^3$$

$$V=0.8 \text{ m}^3, \rho=1.2 \text{ kg/m}^3$$

$$V=0.5 \text{ m}^3, \rho=1.66 \text{ kg/m}^3$$

№ 25 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-1

Bug' qozonidagi bug'ning harorati 350⁰F ga teng. Bu haroratni ⁰C da ifodalang

$$t=176.6 \text{ }^{\circ}\text{C}$$

$$t=101.6 \text{ }^{\circ}\text{C}$$

$$t=196.6 \text{ }^{\circ}\text{C}$$

$$t=276.6 \text{ }^{\circ}\text{C}$$

№ 26 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Termodinamikaning 1-qonunining ta'rifini aniqlang

Tizimga berilgan issiqlik miqdori tizimning ichki energiyasini o'zgartirishga va ish bajarishga sarflanadi

Tizimga berilgan issiqlik miqdori tizimning ichki energiyasini o'zgartirishga sarflanadi

Tizimga berilgan issiqlik miqdori tizimning ichki energiyasini ish bajarishga sarflanadi

Ish va issiqlik qonunini ifodalaydi

№ 27 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Qaysi formula termodinamikaning 1-qonunini ifodalaydi

$$dq = du + A$$

$$dl = pd\mathcal{V}$$

$$dq = TdS$$

$$Q = mC_p(t_2 - t_1)$$

№ 28 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Entalpiya nima

Tizimning bosimi va hajmi ko'paytmasining tizim ichki energiyasi yig'indisi

Tizim ichki energiyasi o'zgarishi

Ichki energiyasi yig'indisi

Oxirgi va avvalgi ichki energiyalar yig'indisi

№ 29 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Entalpiya nima

Ha chunki bosim P, hajm V, temperature T lar o'zgarishiga bog'liq

Ha chunki faqat bosim P o'zgarishiga bog'liq

Yo'q chunki u haroratga bog'liq emas

Yo'q chunki entalpiya o'lchov birligi

№ 30 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Entropiyaga ta'rif bering

Tizimga kiritilgan issiqlik miqdorining tizim haroratining nisbati bilan o'lchovchi kattalik

$$S=dQ/T \text{ [kJ/kg}^{\circ}\text{C]}$$

Issiqlik ortishining $dQ>0$ haroratga nisbati

Issiqlik kamayishining $dQ<0$ haroratga nisbati

$dQ=0$ adiabatik jarayonda entropiya o'zgarmaydi $S_1=S_2$

№ 31 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-1

Politropik jarayonning tenglamasini ko'rsating

$$PV^n=\text{const}$$

$$PV=\text{const}$$

$$P(V_1-V_2)=\text{const}$$

$$P/V=\text{const}$$

№32 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-1

Qaysi tenglama adiabatik jarayonni ifodalaydi

$$PV^n=\text{const, bunda } n=C_p/C_v$$

$$PV^n=\text{const}$$

$$PV=\text{const}$$

$$PT/R$$

№ 33 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-1

Qaysi tenglama izoxorik jarayonni ifodalaydi

$$P/T=\text{const}$$

$$P_1/P_2=\text{const}$$

$$PV^n=\text{const}$$

$$PV=RT$$

№ 34 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-1

Izotermik jarayonning tenglamasini ko'rsating

$$P_1/P_2=V_2/V_1$$

$$PV=RT$$

$$P/T=\text{const}$$

$$PV=\text{const}$$

№ 35 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Izobarik jarayonning tenglamasini ko'rsating

$$V/T=\text{const}$$

$$P_1/P_2=V_2/V_1$$

$$PV=RT$$

$$P/T=\text{const}$$

№ 36 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

1kg azot 70°C haroratda va $V=0.2$ Pa bosimda qanday hajmni egallaydi

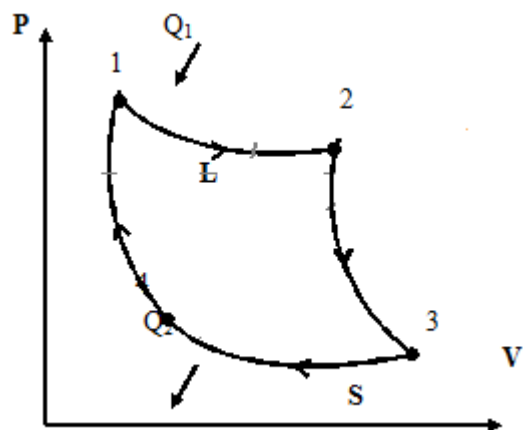
$$V=0.509 \text{ m}^3/\text{kg}$$

$$V=705 \text{ m}^3/\text{kg}$$

$$V=0.9 \text{ m}^3/\text{kg}$$

$$V=150 \text{ m}^3/\text{kg}$$

№ 37 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1



PV diagrammadagi karno siklining 1-2 chizig'i nimani ifodalaydi

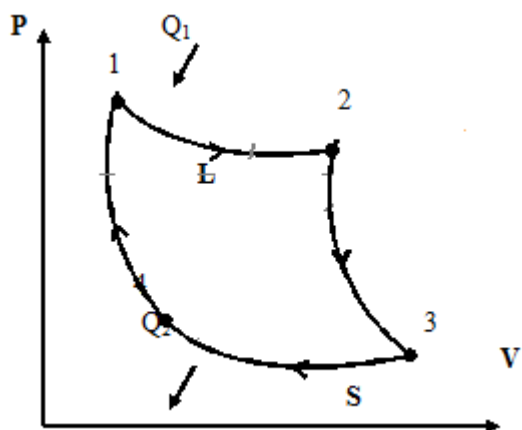
Izotermik kengayish

Issiqlik berish

adiabatik kengayish

Izobarik kengayish

№ 38 Fan bobli-2; Fan bo'limi-2; Qiyinlik darajasi-1



PV diagrammadagi karno siklining 3-4 chizig'i nimani ifodalaydi

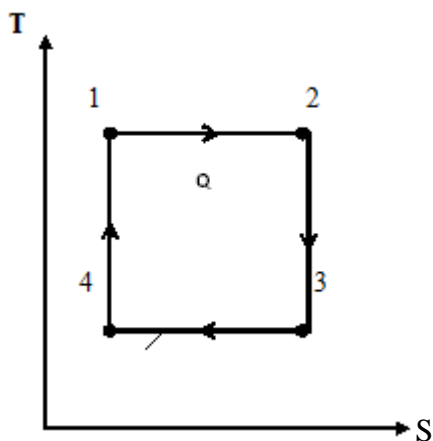
Izotermik kengayish

Issiqlik berish

adiabatik kengayish

Izobarik kengayish

№ 39 Fan bobli-2; Fan bo'limi-2; Qiyinlik darajasi-1



T-S diagrammadagi karno siklining 1-4 chizig'i nimani ifodalaydi

Adiabatik torayish

Adiabatik kengayish

Izotermik kengayish

Izotermik torayish

№ 40 Fan bobli-2; Fan bo'limi-2; Qiyinlik darajasi-1

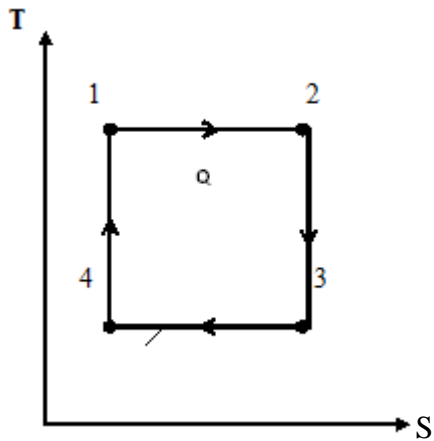
Jismg
bo'la

Term

Boyl

Energ

Term



T-S diagrammadagi karno siklining 3-4 chizig'i nimani ifodalaydi

Izotermik torayish

Adiabatik kengayish

Izotermik kengayish

Adiabatik torayish

№ 41 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Ixtiyoriy olingan Karno siklining FIK ini aniqlang

$$\eta_t = 1 - \frac{T_2}{T_1}$$

$$\eta_t = 1 + \frac{T_2}{T_1}$$

$$\eta_t = 1 - \frac{T_1}{T_2}$$

$$\eta_t = 1 + \frac{T_1}{T_2}$$

№ 42 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Siklining eksbergiya FIK I qaysi ifodaga mos keladi bunda dl kirishdagi va chiqishdagi eksbergiyalar farqi, l_1 kirishdagi eksbergiya

$$\eta_t = 1 - \frac{dl}{l}$$

$$\eta_t = 1 + \frac{dl}{l}$$

$$\eta_t = 1 - \frac{dl}{dt}$$

$$\eta_t = 1 + \frac{dl}{dt}$$

№ 43 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-1

Ixtiyoriy olingan Karno siklining FIK ini aniqlang

$$\eta_t = 1 - \frac{q_2}{q_1}$$

$$\eta_t = 1 + \frac{q_2}{q_1}$$

$$\eta_t = 1 - \frac{q_1}{q_2}$$

$$\eta_t = 1 + \frac{q_1}{q_2}$$

№ 44 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-1

Karnoning teskari sikli uchun FIK ni ko'rsating

$$E = T_2 / (T_1 - T_2)$$

$$E = 1 - T_2$$

$$E = T_2 / T_1 - 1$$

$$E = T_2 / T_1 + T_2$$

№ 45 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-1

«Issiqlik kamroq qizigan jismdan ko'proq qizigan jismga tashqi ish sarflamay turib o'z – o'zicha o'ta olmaydi». Bu qaysi qonun ta'rifi?

Termodinamikaning 2 - qonuni

Termodinamikaning 1 – qonuni

Nyuton qonuni

Energiyaning saqlanish qonuni

№ 46 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-1

Termodinamikaning 2- qonuniga Tomson bergan tarifni toping

Issqlik mashinalariga berilgan issqlikning hammasini ishga aylantirib bo'lmaydi

Berilgan issqlik miqdori sovutgichdan olinayotgan issqlikdan oz bo'lmaydi

Berilgan issqlik miqdori sovutgichdan olinayotgan issqlikka teng bo'ladi

Mashinaning FIK I 1 ga teng bo'ladi

№ 47 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-1

Termodinamikaning 2- qonuniga Saddi Karno bergan tarifni toping

Issqlikni mexanik ishga aylantirish uchun haroratlar farqi bo'lishi kerak

Berilgan issqlik miqdori sovutgichdan olinayotgan issqlikdan oz bo'lmaydi

Berilgan issqlik miqdori sovutgichdan olinayotgan issqlikka teng bo'ladi

Issqlikni mexanik ishga aylantirish uchun haroratlar teng bo'lishi kerak

№ 48 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-1

Termodinamikaning 2- qonuniga Klauzis bergan tarifni toping

Issqlik kompensatsiyasiz o'z o'zicha sovuq jismdan issiq jismga o'tolmaydi

Berilgan issqlik miqdori sovutgichdan olinayotgan issqlikka teng bo'ladi

Issqlik kompensatsiyasiz o'z o'zicha sovuq jismdan issiq jismga o'tadi

Issqlikni mexanik ishga aylantirish uchun haroratlar teng bo'lishi kerak

№ 49 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-1

Termodinamikaning ikkinchi qonunining matematik ifodasi

$$dS > dq/T$$

$$dS = dq$$

$$dS < q^*T$$

$$dS < dq/t$$

№ 50 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-1

Neristning issqlik teoremasi

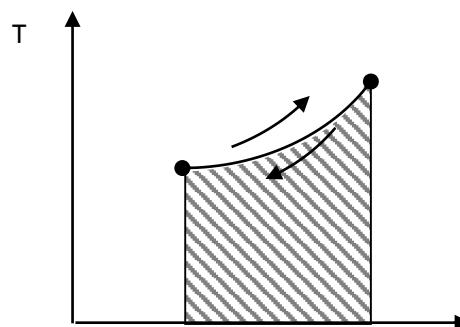
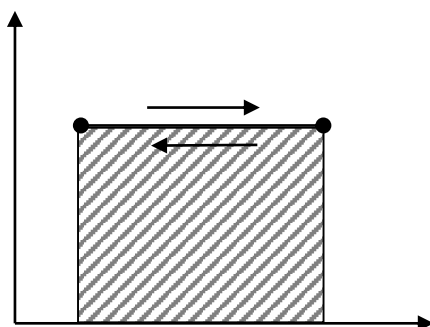
Absolyut nolga intiladigan haroratda gazning entropiyasi nolga intiladi

$$T=0^0K \text{ da } dS=0, S=dQ/T+S_0$$

$T=0^0\text{K}$ da $dS=0$, $S=dQ/T$

$T=100^0\text{K}$ da $dS=0$, $S=dQ+S_0$

№ 51 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1



Quyidagi P-V va T-S diagrammalar qaysi jarayonga tegishli

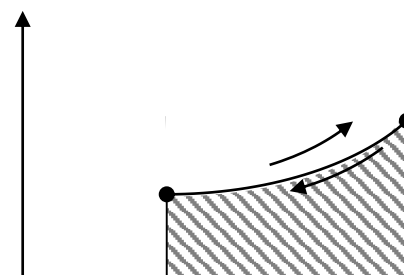
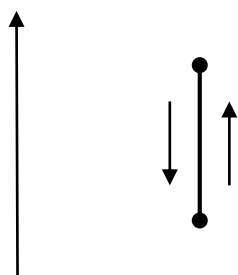
Izobarik jarayonga

Izoxorik jarayonga

Izotermik jarayonga

Adiabatik jarayonga

№ 52 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1



Quyidagi P-V va T-S diagrammalar qaysi jarayonga tegishli

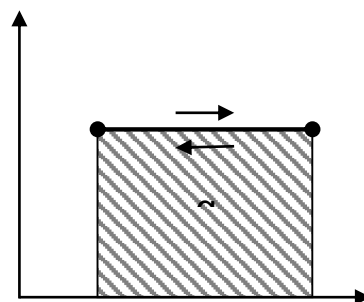
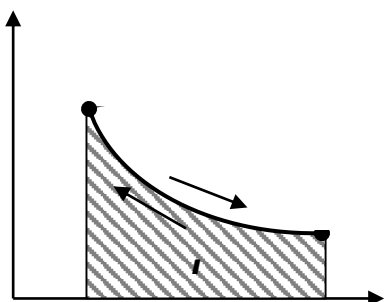
Izoxorik jarayonga

Izobarik jarayonga

Izotermik jarayonga

Adiabatik jarayonga

№ 53 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-1



Quyidagi P-V va T-S diagrammalar qaysi jarayonga tegishli

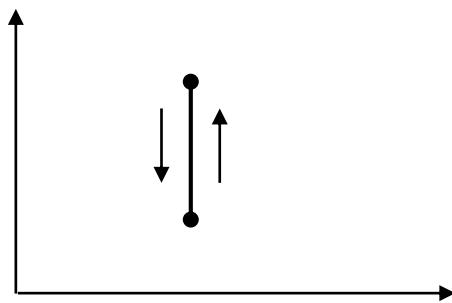
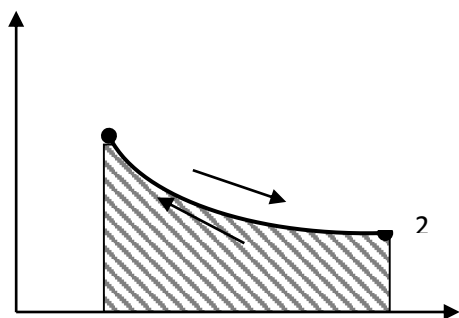
Izotermik jarayonga

Izoxorik jarayonga

Izobarik jarayonga

Adiabatik jarayonga

№ 54 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-1



Quyidagi P-V va T-S diagrammalar qaysi jarayonga tegishli

Adiabatik jarayonga

Izoxorik jarayonga

Izotermik jarayonga

Izobarik jarayonga

№ 55 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-1

Qaysi jarayonda bosim va hajm bir-biriga teskari munosabatda bo'ladi $P_2/P_1=V_1/V_2$

Izotermik jarayonga

Izoxorik jarayonga

Izobarik jarayonga

Adiabatik jarayonga

№ 56 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Qaysi jarayonda gazning hajmi uning absolyut temperaturasi proporsional bo'ladi

$$V_2/V_1 = T_2/T_1$$

Izobarik jarayonga

Izoxorik jarayonga

Izotermik jarayonga

Adiabatik jarayonga

№ 57 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Qaysi jarayonda gazning bosimi uning absolyut temperaturasi proporsional bo'ladi

$$P_2/P_1 = T_2/T_1$$

Izoxorik jarayonga

Izotermik jarayonga

Izobarik jarayonga

Adiabatik jarayonga

№ 58 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Qaysi jarayonda gazning bosimi uning hajmiga teskari proporsional bo'ladi $P_2/P_1 = V_1/V_2$

Izotermik jarayonga $T = \text{const}$

Izoxorik jarayonga $V = \text{const}$

Izobarik jarayonga $P = \text{const}$

Adiabatik jarayonga $Q = \text{const}$

№ 59 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Quyidagi tenglamalar qaysi jarayonga taaluqli $K \cdot dV/V = -dP/P$ yoki $P_1 V_1^k = P_2 V_2^k$

Adiabatik jarayonga $dQ = 0$

Izoxorik jarayonga $V = \text{const}$

Izobarik jarayonga $P=\text{const}$

Izotermik jarayonga $T=\text{const}$

№ 60 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Kattalik $K=C_p/C_v$ qanday nomlangan

Adiabata ko'rsatgichi

Politropa ko'rsatgichi

Gaz universal doimiysi

Bolsman doimiysi

№ 61 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Qanday gazlar uchun adiabata ko'rsatgichi $K=1.66$ ga teng

Bir atomli gazlar uchun

Ikki atomli gazlar uchun

Uch atomli gazlar uchun

Ko'p atomli gazlar uchun

№ 62 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Adiabata ko'rsatgichi k qanday qiymatlarga bo'ladi

$K < 1$

$K > 1$

$K < 0$

$K > 0$

№ 63 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Qaysi javobda gaz holat tenglamasi to'g'ri ko'rsatilgan

Barcha javoblar to'g'ri

$PV=RT$

$PV/T=R$

$PV/T=\text{const}$

№ 64 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Fure qonunini ko'rsating

Issiqlik o'tkazuvchanlik orqali beriladigan issiqlik oqimining vektori harorat gradientiga to'g'ri proporsional

Issiqlik o'tkazuvchanlik koeffitsiyenti issiqlik oqimiga proporsional

$$q = \text{grad}$$

Buyumdan uzatilgan issiqlik oqimi issiqlik o'tkazuvchanlik koeffitsiyentiga bog'liq

№ 65 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-1

Issiqlik o'tkazuvchanlik koeffitsiyenti qanday o'lchov birligiga ega

$$Vt/(m^0K)$$

$$Vt/(m^2 \cdot 0K)$$

$$Vt/(kg \cdot 0K)$$

$$Vt/(l \cdot 0K)$$

№ 66 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-1

Metallardan qaysilari eng ko'p issiqlik o'tkazuvchanlik koeffitsiyentiga ega

Kumush va mis

Alyuminiy va mis

Kumush va oltin

Oltin va mis

№ 67 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-1

Tekis devor uchun Fure tenglamasini ko'rsating

$$Q = (t_{c1} - t_{c2}) \lambda / \delta$$

$$Q = (t_{c2}) \lambda / \delta$$

$$Q = (t_{c1}) \lambda / \delta$$

$$Q = (t_{c1} - t_{c2}) \lambda$$

№ 68 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-1

Beton devor orqali o'tayotgan issiqlik oqimi Q ni aniqlang. Beton devor qalinligi 200mm balandligi h=2.5 va uzunligi l=2m devor yuzalaridagi harorat $t_{c1}=20^{\circ}C$, $t_{c2}=-10^{\circ}C$ issiqlik o'tkazuvchanlik koeffitsiyenti $\lambda = 1$

$$750 Vt$$

$$75 Vt$$

70 Vt

50 Vt

№ 69 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Devorning issiqlik qarshiligini aniqlang

$$R_{\lambda} = \delta / F \lambda$$

$$R_{\lambda} = \delta / F \lambda$$

$$R_{\lambda} = \delta / \lambda$$

$$R_{\lambda} = \delta F \lambda$$

№ 70 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Devorning issiqlik o'tkazuvchanligini aniqlang

1/ R λ devorning issiqlik qarshilgiga teskari

$$R_{\lambda} = \delta / F \lambda$$

$$R_{\lambda} = \delta / F \lambda$$

$$R_{\lambda} = \delta / \lambda$$

№ 71 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Silindrik devorning termik qarshilgini toping

$$R_y = \frac{1}{K_y} = \frac{1}{\alpha_1 d_1} + \sum_{i=1}^n \frac{1}{2\lambda_i} \cdot \ln \frac{d_{i+1}}{d_i} + \frac{1}{\alpha_2 d_{n+1}}$$

$$R_y = \sum_{i=1}^n \frac{1}{2\lambda_i} \cdot \ln \frac{d_{i+1}}{d_i} + \frac{1}{\alpha_2 d_{n+1}}$$

$$R_y = \frac{1}{\alpha_1 d_1} + \sum_{i=1}^n \frac{1}{2\lambda_i} \cdot \ln \frac{d_{i+1}}{d_i}$$

$$R_y = \frac{1}{\alpha_1 d_1} + \sum_{i=1}^n \frac{1}{2\lambda_i} + \frac{1}{\alpha_2 d_{n+1}}$$

№ 72 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Ko'p qatlamli silindrik devordan o'tuvchi issiqlik oqimi qaysi formula bilan aniqlanadi

$$Q = \frac{\pi l(t_1 - t_2)}{\frac{1}{\alpha_1 d_1} + \sum_{i=1}^n \frac{1}{2\lambda_i} \cdot \ln \frac{d_{i+1}}{d_i} + \frac{1}{\alpha_2 d_{n+1}}}$$

$$Q = \frac{\pi l(t_1 - t_2)}{\frac{1}{\alpha_1 d_1} + \sum_{i=1}^n \frac{1}{2\lambda_i} \cdot \ln \frac{d_{i+1}}{d_i}}$$

$$Q = \frac{\pi l(t_1 - t_2)}{\frac{1}{\alpha_1 d_1} \cdot \ln \frac{d_{i+1}}{d_i} + \frac{1}{\alpha_2 d_{n+1}}}$$

$$Q = \frac{\pi l}{\frac{1}{\alpha_1 d_1} + \sum_{i=1}^n \frac{1}{2\lambda_i} \cdot \ln \frac{d_{i+1}}{d_i} + \frac{1}{\alpha_2 d_{n+1}}}$$

№ 73 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Issiqlik o'tkazuvchanlik ko'effitsiyenti qanday o'lchov birligiga ega

Gazlar aralashmasi 10 kg N₂ va 15 kg O₂ dan iborat. Aralashmaning molekulyar massasi

Vt/(m*⁰K) 30,3

Vt/(m²*⁰K) 28

Vt/(kg*⁰K) 32

Vt/(l*⁰K) 24,6

№ 74 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Nyuton-Rixman qonuni formulasini ayting

$$Q = \alpha_1 F(t_1 - t_{\text{oesl}})$$

$$Q = F(t_1 - t_{\text{oesl}})$$

$$Q = \alpha_1 (t_1 - t_{\text{oesl}})$$

$$Q = \alpha_1 F$$

№ 75 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Issiqlik berish ko'effitsiyentining o'lchov birligini ko'rsating

α , Vt/(m*⁰K)

Vt/(m²*⁰K)

Vt/(kg*⁰K)

Vt/(I*⁰K)

№ 76 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Nyuton-Rixman formulasidagi t_1 va $t_{\text{d\`e\`e\`e\`e\`e\`e\`e\`e}}$ lar haroratini tushuntiring

t_1 -qattiq sirt. $t_{\text{d\`e\`e\`e\`e\`e\`e\`e\`e}}$ -suyuqlik harorati

t_1 -qattiq sirt. $t_{\text{d\`e\`e\`e\`e\`e\`e\`e\`e}}$ -sirt harorati

t_1 -qattiq sirt. $t_{\text{d\`e\`e\`e\`e\`e\`e\`e\`e}}$ -suv harorati

t_1 -qattiq toza. $t_{\text{d\`e\`e\`e\`e\`e\`e\`e\`e}}$ -suyuqlik harorati

№ 77 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-1

Tabiiy konveksiya qanday konveksiya

Suyuqlik yoki gazlarning turli haroratlarida zichlik turli xil bo'lganidan ko'taruvchi kuch hosil bo'ladi va suyuqlik harakatga keladi

Suyuqlik yoki gazlarning zichliklari turli xil bo'lganidan ko'taruvchi kuch hosil bo'ladi va suyuqlik harakatga keladi

Qattiq sirtgategib turganda va suyuqlik harakatga keladi

Isish sababli suyuqlik harakatga keladi

№ 78 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-2

Majburiy konveksiya nima

Issiqlik almashinuvchi suyuqlik yoki gazni majburiy harakatlanishi (nasos va ventilyator yordamida)

Qattiq sirtgategib turganda va suyuqlik harakatga keladi

Isish sababli suyuqlik harakatga keladi

Sovuq harorat sababli suyuqlik harakatga keladi

№ 79 Fan bobii-2; Fan bo'limi-2; Qiyinlik darajasi-2

Konveksiya hosil bo'lishida suyuqlikning hajmiy kengayish koeffitsiyenti β juda muhim rol o'ynaydi u nimaga bog'liq

$$\beta = 1/T$$

$$\beta = P_1 - P_2$$

$$\beta = t_1 - t_2$$

Solishtirma hajmga

№ 80 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-2

Issiqlik berish koeffitsiyenti a nimaga bog'liq

Issiqlik berish koeffitsiyenti a suyuqlikning fizik xossalari va oqim xarakteriga bog'liq

a ga bog'liq

Issiqlik berish koeffitsiyenti oqim tezligiga bog'liq

Issiqlik berish koeffitsiyenti issiq oqimga bog'liq

№ 81 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-2

Issiqlik berish koeffitsiyenti quyidagi kattaliklarga bog'liq

Qattiq sirt uzunligi, oqim tezligi, suyuqlikning issiqlik o'tkazuvchanligi issiqlik sig'imi, zichligi va solishtirma hajmi

Qattiq sirt uzunligi, suyuqlikning issiqlik o'tkazuvchanligi issiqlik sig'imi, zichligi va solishtirma hajmi

Qattiq sirt uzunligi, oqim tezligi, suyuqlikning issiqlik sig'imi, zichligi va solishtirma hajmi

Qattiq sirt uzunligi, oqim tezligi, suyuqlikning issiqlik o'tkazuvchanligi issiqlik sig'imi va solishtirma hajmi

№ 82 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-2

O'xshashlik nazariyasining Nusselt soni mohiyatini ayting

$$Nu = \frac{\alpha l_0}{\lambda}$$

$$Nu = \frac{l_0}{\lambda}$$

$$Nu = \frac{\alpha}{\lambda}$$

$$Nu = \frac{\alpha l_0}{\lambda}$$

№ 83 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-2

Reynolds sonining mazmunini ifodalang $Re = \frac{wl_0}{\nu}$

Reynolds soni, inerstiya kuchlari bilan qovushoqlik nisbatini xarakterlaydi

Reynolds soni qovushoqlikni xarakterlaydi

Reynolds soni, inerstiya kuchlarini xarakterlaydi

Reynolds soni, haroratni xarakterlaydi

№ 84 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-2

Prandtl sonining mazmunini ifodalang $Pr = \frac{\nu}{a}$

Prandtl soni, suyuqlikning fizikaviy xossalarini xarakterlaydi

Prandtl soni, suyuqlikning issiqlik xossalarini xarakterlaydi

Prandtl soni, suyuqlikning kimyoviy xossalarini xarakterlaydi

Prandtl soni, haroratni xarakterlaydi

№ 85 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-2

Erkin konveksiya suyuqlikni harakatga keltiruvchi kuchni ko'rsatuvchi koeffitsiyentni izohlang

Suyuqlik issiqlikdan kengayishi natijasida hosil bo'ladigan ko'taruvchi kuchning qovushoqlik kuchiga nisbatini ko'rsatadi

Gravitatsiya kuchini ifodalaydi

Hajmiy kengayishni haroratga bog'liq ekanligini ko'rsatadi

Qovushoqlik kuchi tavsifini ifoda etadi

№ 86 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-2

Yorug'lik ham elektromagnit to'lqin xarakteriga ega bo'lib u fazoda tarqalishi to'lqin uzunligi va chastotasi bilan ifodalanadi bunda c nima

C yorug'likning vakuumdagi tezligi $c=3 \cdot 10^8$

C nurlanish parametric

C yorug'likning gazdagi tezligi

C yorug'likning suvdagi tezligi

№ 87 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-2

Yorug'lik tarkibidagi to'lqin uzunligi $\lambda = 0,8-80$ mkm bo'lgan nurlar eng ko'p energiya tarqatadi bu nur qanday ataladi

Infraqizil nurlar

Ko'rinuvchi nurlar

Ultrabinafsha nurlar

Ko'rinmaydigan nurlar

№ 88 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-2

Buyumga tushgan yorug'lik nurlari unda yutiladi. Yutilish koeffitsiyenti $A = E_A / E_{tush}$ bunda E_{tush} buyumga tushgan nurlanish oqimi E_A nima

E_A buyum sirtida yutilgan energiya

E_A buyum sirtida issiqlikka aylanib qizdiruvchi energiya

E_A buyum sirtida yutilmagan energiya

E_A buyum sirtidan o'tib ketgan energiya

№ 89 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-2

Buyum sirtiga tushgan nurning hammasi buyumda yutilsa bunday buyum qanday ataladi $A=1$

Absolyut qora jism

Absolyut kulrang jism

Absolyut oq jism

Absolyut shaffof jism

№ 90 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-2

Buyumda yutilish koeffitsiyenti $A < 1$ va tushuvchi nurning to'lqin uzunligiga bog'liq bo'lmasa bu qanday buyum

Kulrang buyum deyiladi

Oq buyum deyiladi

Qora buyum deyiladi

Sariq buyum deyiladi

№ 91 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-2

Nur buyumdan nurlanishda to'liq uzunligining maksimumiga λ_m ga to'g'ri keluvchi haroratning absolyut temperaturasi mos keladi ya'ni $\lambda_m = 2.898/10^3$ bu qanday qonun

Vin qonuni

Bolsman qonuni

Plank qonuni

Stefan- Bolsman qonuni

№ 92 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-2

Nur oqimining sirtidagi zichligi absolyut qora jism uchun temperaturaga bog'liq $E_0 = \delta_0 T^4$

Stefan- Bolsman qonuni

Bolsman qonuni

Plank qonuni

Vin qonuni

№ 93 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-2

Jismning qoralik darajasi quyidagicha ifodalanadi $\varepsilon = E/E_0$ bunda E nima

Jismning o'zini qoralik darajasi

Jismga tushuvchi energiya

Kulrang jismni qoralik darajasi

Stefan- Bolsman doimiysi

№ 94 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-2

Qoralik darajasi tushunchasidan foydalanib Stefan- Bolsman qonunini yozamiz

$$E_0 = C_0 \left(\frac{T}{100}\right)^4 \quad \text{bunda C nima}$$

Real jismning nurlanish koeffitsiyenti

Bolsman doimiysi

Nurlanish doimiysi

Real qora jismning qoralik darajasi

№ 95 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-2

Jismning qoralik darajasi uning nur yutishda yutilish koeffitsiyentiga teng $A=E$ demak jism qancha ko'p nur yutsa shuncha ko'p nurlantiradi Shundan quyidagi xulosalarning qay biri to'g'ri

Absolyut oq jism nur yutish ham chiqarish ham qobiliyatiga ega emas

Absolyut qora jism nur yutadi ammo nurlantirmaydi

Absolyut oq jism nur yutish ham chiqarish ham qobiliyatiga ega

Absolyut oq jism nur yutadi biroq nur chiqarmaydi

№ 96 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-2

Ishchi jism bir nechta o'zgarishlarga uchrab yana boshlang'ich holatiga qaytsa unga nima deyiladi

Aylanma termodinamikaviy jarayon yoki sikl

Termodinamikaviy sistema

Termodinamik jarayon

Issiqlik sig'imi

№ 97 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-2

Vinning siljish qonunini yozamiz $\lambda_m = 2.898/10^3 T$ qonuniga t'arif bering

Nurlanuvchi buyumning absolyut temperaturasi oshib borsa nurning maksimum to'lqin uzunligi qisqa to'lqinlar tomon siljiydi

Harorat oshishi bilan to'lqin uzunligi oshadi

Harorat oshishi bilan to'lqin uzunligi kamayadi

Haroratga bog'liq emas

№ 98 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-2

Jism sirtidan nurlanishning issiqlik energiyasi nurning to'lqin uzunligiva jism harakatiga

bog'liq energiya quyidagicha yoziladi $I_{0\lambda} = C_1 \frac{\lambda^{-5}}{l^{C_2/\lambda T_1}}$ bu kimning qonuni

Plank qonuni

Vin qonuni

Bolsman qonuni

Avogadro qonuni

№ 99 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-2

Jism sirtidan integral nurlanish qiymatini nazariy yo'l bilan aniqlang

$$E_0 = \int_0^{\infty} I_{0\lambda} d\lambda = \int_0^{\infty} \frac{C_1 d\lambda}{\lambda^5 (e^{C_2/\lambda T_1} - 1)}$$

bu qonun kimga tegishli

Stefan- Bolsman qonuni

Bolsman qonuni

Plank qonuni

Vin qonuni

№ 100 Fan bob-2; Fan bo'limi-2; Qiyinlik darajasi-2

Bu qonunda nurlanish energiyaning qiymati $E=C_1T_1/C_2 \lambda^{-4}$ bu kimning qonuni

Reley –Jins qonuni

Stefan- Bolsman qonuni

Bolsman qonuni

Plank qonuni

№101 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 1

Suyuqlik solishtirma og'irligi nimaga teng?

$$\gamma = \frac{G}{V}$$

$$\gamma = \frac{v}{a}$$

$$g = \frac{v}{a}$$

$$\rho = \frac{\gamma}{g}$$

№102 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 1

Suyuqlik hajmiy kengayish temperatura koeffitsiyenti.

$$\beta_t = -\frac{1}{v} \cdot \frac{\Delta v}{\Delta t}$$

$$\beta_t = -\frac{I}{\Delta p} \frac{\Delta v}{\Delta t}$$

$$\beta_p = -\frac{I}{v} \frac{\Delta v}{\Delta p}$$

$$p\vartheta = RT$$

№103 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Suyuqliklardagi ichki ishqalanish kuchi qaysi formula bilan aniqlanadi.

$$\bar{F} = \pm \mu \cdot s \frac{du}{dy}$$

$$\tau = \pm \mu \frac{du}{dy}$$

$$v = \frac{\mu}{\rho}$$

$$\bar{P} = \frac{2\delta}{z}$$

№104 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 1

Suyuqliklar muvozanati Eyer differensial tenglamalari.

$$\frac{\partial p}{\partial x} = \rho X, \quad \frac{\partial p}{\partial y} = \rho Y, \quad \frac{\partial p}{\partial z} = \rho Z$$

$$x_{dx} + y_{dy} + z_{dz} = 0$$

$$ax + gz = consz$$

$$\frac{\omega^2 \cdot r}{2} - gz = \text{const}$$

№105 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Tekis tezlanuvchan harakat qilayotgan idishdagi suyuqlik yuzasi tenglamasi.

$$ax + gz = \text{const}$$

$$\frac{\omega^2 \cdot r}{2} - gz = \text{const}$$

$$p = p_0 + \rho gh$$

$$x_{dx} + y_{dy} + z_{dz} = 0$$

№106 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 1

Tekis tezlanuvchan harakat qilayotgan idishdagi suyuqlik yuzasi tenglamasi.

$$p = p_0 + \rho h$$

$$gdz = 0$$

$$p = \rho gh$$

$$ax + gz = \text{const}$$

№107 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Bosim o'lchash asboblari qaysi javobda to'g'ri ko'rsatilgan?

pyezometr, manometr, vakuummetr

manometr, areometr, termometr

termometr, vakuummetr, areometr

areometr, manometr, pyezometr

№108 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 1

Suyuqlikning idish tubiga bosim kuchi nimaga teng?

$$\bar{P} = \gamma h s$$

$$\bar{P} = (p_0 + pgh)s$$

$$p = p_0 + pgh$$

$$\bar{P} = (p_0 + p)s$$

№109 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 1

Egri sirtga ta'sir qiluvchi bosim kuchi qanday aniqlanadi?

$$\bar{P} = \sqrt{\bar{P}_x^2 + \bar{P}_y^2}$$

$$\bar{P} = \gamma h s$$

$$\bar{P} = \gamma v$$

$$\bar{P} = p g \bar{V}$$

№110 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Arximed qonunini qaysi formula ifodalaydi?

$$\bar{P} = \gamma V$$

$$\gamma = \frac{v}{a}$$

$$\bar{P} = \gamma h s$$

$$p = p_0 + pgh$$

№111 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Gidrodinamika asosiy masalasini ifodalovchi funksiyalar qaysi javobda to'g'ri ko'rsatilgan?
$p = f_1(x, y, z, t), u = f_2(x, y, z, t)$
$p = f_1(x_1, y_1, t)$
$u = f(x_1, y_1, t)$
$p = f(x_1, y_1, t_1)$

№112 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Suyuqlik beqaror harakati qanday harakat?
Oqim fazosi har bir nuqtasida p va v t ga bog'liq o'zgargan harakat
Oqim fazosi har bir nuqtasida P va V o'zgarmas bo'lgan harakat
Barcha tomondan qattiq devor bilan chegaralangan suyuqlik harakati
Faqat og'irlik kuchi ta'siridagi suyuqlik harakati

№113 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Suyuqlik sarfi qaysi formula yordamida aniqlanadi?
$Q = \vartheta \cdot \omega$
$\rho = \frac{m}{v}$
$\chi = 2h + b$
$R = \frac{\omega}{\chi}$

№114 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Gidrodinamika asosiy masalasini ifodalovchi funksiyalar qaysi javobda to'g'ri ko'rsatilgan?
$p = f_1(x, y, z, t), u = f_2(x, y, z, t)$
$p = f_1(x_1, y_1, t)$
$u = f(x_1, y_1, t)$
$p = f(x_1, y_1, t_1)$

№115 Fan bob 3 Fan bo'limi 1 Qiyinchilik darajasi 2

Suyuqlikning tegishli kesimlardagi tezlik bosimi qanday ifodalanadi?
$\frac{u_i^2}{2g}$
$\frac{p}{\gamma}$
z
h

№116 Fan bob 3 Fan bo'limi 1 Qiyinchilik darajasi 2

Venturi suv o'lchagichi formulasi qaysi javobda ko'rsatilgan?
$Q = c\sqrt{h}$
$Q = \frac{v}{T}$
$Q = \vartheta \cdot \omega$
$Q = \frac{Q}{\gamma}$

№117 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Laminar oqimdan turbulentoqimga o'tish chegarasini qandaysonifodalaydi?
$Re = \frac{v \cdot d}{\nu}$
$Sh = \frac{l}{vt}$
$Q = c\sqrt{h}$
$Re = \frac{v}{\nu d}$

№118 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Qaysijavobdao'xshashlikkriteriyalaritog'riko'rsatilgan?
$Ne = \frac{Ft}{mv}, Re = \frac{vl}{\nu}$
$R = \frac{\omega}{\chi}, Ne = \frac{Ft}{mv}$
$Re = \frac{vl}{\nu},$
$Q = c\sqrt{h}$

№119 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Laminar oqimda o'rtacha tezlik nimaga teng?
$V = \frac{U_{\max}}{2}$
$U_{\max} = \frac{P_1 - P_2}{4\mu l} R^2$

$$V = 2U_{\max}$$

$$V = \frac{2}{U_{\max}}$$

№120 Fan bobi 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Veysbax formulasi qaysi javobda to'g'ri ko'rsatilgan?

$$h_i = \lambda \frac{l v^2}{d 2g}$$

$$h_i = \lambda \frac{l}{d}$$

$$h = h_i + h_m$$

$$h_m = \xi \frac{v^2}{2g}$$

№121 Fan bobi 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Nisbiy g'adir-budurlik qanday hisoblanadi?

$$E = \frac{\Delta}{d}$$

$$E = d \cdot \Delta$$

$$E = \frac{d}{\Delta}$$

$$\lambda = \frac{64}{\text{Re}}$$

№122 Fan bobi 3 Fan bo`limi 1 Qiyinchilik darajasi 1

Vodoprovod formulasi deb qaysi formulaga aytiladi?

$$Q^2 = k^2 i$$

$$I = h \sqrt{I}$$

$$k^2 = Q^2 \cdot i$$

$$\lambda = \frac{64}{\text{Re}}$$

№123 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

To'g'ri zarba uchun Jukovskiy formulasi qaysi javobda to'g'ri ko'rsatilgan

$$\Delta p_3 = \rho \cdot v_0 \cdot a$$

$$a = \frac{dx}{dt}$$

$$\sigma = E \frac{\Delta R}{R}$$

$$\Delta \rho_3 = v_0 \cdot a$$

№124 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 1

Gidravlikzarbahodisasi dan foydalanib qaysi qurilmayasalgan?.

Gidravliktaran

Gidravlikpress

Gidroakkumulyator

Areometr

№125 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Nasoslarqandayqurilma?

Mexanikenergiyanisuvenergiyasiga aylantiruvchi

Suyuqlikenergiyasiniissiqlikenergiyasigaaylantiruvchi
Suvenergiyasinimexanikenergiyagaaylantiruvchi
Suyuqlikorqaliharakatuzatuvchi

№126 Fan bobi 3 Fan bo`limi 1 Qiyinchilik darajasi 1

Nasosfoydaliishkoeffitsiyentiqandayhisoblanadi
$\eta = \frac{N_{\Phi}}{N}$
$\eta_M = \frac{N_{\Pi}}{N_B}$
$\eta = \eta_{\Gamma} \cdot \eta_M$
$\eta = \gamma Q$

№127 Fan bobi 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Markazdan qochma nasoslar uchun Eyler formulasi qaysi javobda to`g`ri ko`rsatilgan?
$H = \frac{u_2 c_2 \cos \alpha_2 - u_1 c_1 \cos \alpha_1}{g}$
$H_1 = z_1 + \frac{p_1}{\rho g} + \frac{a^2}{2g}$
$N = \frac{\gamma Q H}{102 \eta}$
$A = GH$

№128 Fan bobi 3 Fan bo`limi 1 Qiyinchilik darajasi 1

Avtomobil benzin nasosi qanday nasos?
Diafragmali nasos

Porshenli nasos
Plunjerli nasos
Markazdan qochma nasos

№129 Fan bobi 3 Fan bo`limi 1 Qiyinchilik darajasi 1

Gidravlik va havo uzatmalar qanday vazifa bajaradi?
Suyuqlik yoki havo ishtirokida ikkinchi bir mexanizni harakatlantiradi
Gidravlik zarba oldini oladi
Gidravlik nasos bir qismi bo`lib ishlaydi
Mexanik harakatni suv yoki havo oqimi energiyasiga aylantiradi

№130 Fan bobi 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Gidrodinamik mufta nima?
Yetaklovchi valdagi moment o`zgarsa xam ikkala valdagi moment tengligini ta`minlovchi qurilma
Suyuqlik yordamida energiyani o`zgartiradi
Faqat yetaklovchi val momentini o`zgartiradi

Yetaklovchi valda moment o'zgarsa ikkala valdagi momentlar tengligini ta'minlamaydigan qurilma

№131 Fan bob 3 Fan bo'limi 1 Qiyinchilik darajasi 2

Kuch gidradvigatellari yordamida qanday ish bajariladi?
Silindrda porshenni siljitish yo'li bilan suyuqlik potensial energiyasi mexanik energiyaga aylantiriladi
Suyuqlik oqimi to'g'rilanadi
Nasoslar boshqariladi
Suyuqlik energiyasi mexanik energiyaga aylantiriladi

№132 Fan bob 3 Fan bo'limi 1 Qiyinchilik darajasi 2

Gidrodinamik transformatorlar vazifasi qanday?
Quvvatni yetaklovchi valdan yetaklanuvchi valga uzatuvchi energetik mashina vazifasini bajaradi
Quvvatni yetaklanuvchi valdan yetaklovchi valga uzatadi
Mexanik energiyani suyuqlik energiyasiga aylantiradi
Suyuqlik energiyasini mexanik energiyaga aylantiradi

№133 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Gidravlik uzatmalar qanday qurilma?
Suyuqlik yordamida bir mexanizmning ikkinchi mexanizmini harakatga keltirishiga asoslangan mexanizm
Quvvatni yetaklovchi valdan yetaklanuvchi valga uzatuvchi energetik mashina vazifasini bajaradi
Mexanik energiyani suyuqlik energiyasiga aylantiradi
Har ikkala valdagi momentlarni tenglaydi

№134 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Rotorli nasoslar sarfi qaysi formula yordamida aniqlanadi?
$Q = \eta_x \frac{s \cdot z \cdot n}{600}$
$Q = v \cdot \omega$
$Q^2 = k^2 i$
$Q = c \sqrt{h}$

№135 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Rotorli nasoslarga qaysi nasoslar kiradi?
Shesternyalivintliplastinkaliradialvaaksialporshenli
O'qiynasoslarmarkazdanqochmaporshenli

Diafragmali, plastinkali, shesteriyali, porshenli
Markazdanqochmaplastinkalidiafragmali

№136 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Diafragmalinasoslarqandaysuyuqliklarnihaydaydi
Ximiyaviyaktivsuyuqliklarnihaydaydi
Kanalizatsionsuvlarnihaydaydi
Sug`orishsistemasidaqo`llaniladi
Oqavasuvlarnihaydaydi

№137 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Porshenlinasoslarfoydaliishkoeffitsiyentinimagateng
$\eta = \eta_x \cdot \eta_e \cdot \eta_M$
$\eta = \frac{N_\Phi}{N_\Pi}$
$\eta = \eta_x \cdot \eta_e$
$\eta = \eta_x \cdot \eta_M$

№138 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Nasoslarni birgalikda ishlatishda ularni ulashning qanday usullari bor?
Ketma-ket va parallel

Ulab ishlatish tavsiya qilinmaydi
Faqat ketma-ket
Ulab ishlatib bulmaydi

№139 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Suyuqlik oqimining devorga ta'sir kuchi qanday?
$\bar{P} = \frac{\gamma v^2}{g} s(1 - \cos \alpha)$
$\bar{P} = \rho \cdot s$
$\bar{P} = \frac{2a}{\div}$
$\bar{P} = \gamma h s$

№140 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Gidravlik zarbani susaytirish usullarini ko'rsating?
Jo'mrakni sekin ochib, yopish, sundirgich qo'llanish
Jo'mraklardan foydalanmaslik, truba uzunligini oshirish
Truba uzunligini kamaytirish, jo'mrakni keskin yopish

Jo'mrakni keskin ochish, truba uzunligini kamaytirish

№141 Fan bobi 3 Fan bo`limi 1 Qiyinchilik darajasi 1

Qisqa truba deb qanday trubalarga aytiladi?

Mahalliy qarshiliklar umumiy qarshilikning 5-10% tashkil qilgan trubalar

Uzunligi 10-15sm bo'lgan trubalar

Uzunligi 3-4 sm bo'lgan trubalar

Mahalliy qarshiliklar 1-2%ni tashkil qilgan trubalar

№142 Fan bobi 3 Fan bo`limi 1 Qiyinchilik darajasi 1

Naychalardan qanday maqsadda foydalaniladi?

Suyuqlik sarfini orttirish, ixcham oqimcha olish

Oqimni to'g'ri yo'naltirish

Sarfni kamaytirib, oqimni to'g'rilash

Gidravlik qarshilikni kamaytirish

№143 Fan bobi 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Suyuqlikning teshikdan oqib chiqishida siqilish koeffitsiyenti qaysi javobda t o'g'ri ko'rsatilgan.

$$E = \frac{\omega_C}{\omega_T}$$

$$E = \frac{\omega}{\omega_C}$$

$$E = v \cdot \varphi$$

$$\varphi = \frac{\omega_T}{\omega_C}$$

№144 Fan bobi 3 Fan bo'limi 1 Qiyinchilik darajasi 1

Mahalliy qarshiliklarda napor yo'qotilishi qaysi formula yordamida hisoblanadi?

$$h_M = \xi \frac{v^2}{2g}$$

$$h_M = \lambda \frac{l}{d}$$

$$h_M = \lambda \frac{l v^2}{d 2g}$$

$$h_M = \frac{v^2}{2g}$$

№145 Fan bobi 3 Fan bo'limi 1 Qiyinchilik darajasi 2

Oqimning laminar soxasida Darsi koeffitsiyenti qanday hisoblanadi?

$\lambda = \frac{64}{Re}$
$\lambda = \xi \frac{v^2}{2g}$
$\lambda = \frac{Re}{64}$
$\lambda = \frac{1}{2 \lg E}$

№146 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 1

Uzunlik bo'yicha napor yo'qotilishi qaysi javobda to'g'ri ko'rsatilgan?
$h_l = \lambda \frac{l}{d} \frac{v^2}{2g}$
$h_l = E \frac{v^2}{2g}$
$h_l = \frac{64}{Re}$
$h_l = \lambda \frac{v^2}{2g}$

№147 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Gidrodinamik o'xshashlikning Frud kriteriysi qaysi javobda to'g'ri ko'rsatilgan?
$F_r = \frac{v^2}{gl}$
$F_r = \frac{l}{vt}$
$F_r = \frac{F \cdot t}{mv}$
$F_r = \frac{p}{\rho v^2}$

№148 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 1

Silindrikquvurlarda laminar oqimdan turbulent oqimga o'tish soni kanchaga teng?
2320
786
460
580

№149 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 1

Rejim o'zgaradigan kritik tezlik qaysi javobda to'g'ri ko'rsatilgan?
$V_{kp} = \frac{Re_{kp} \cdot v}{d}$
$V_{kp} = \frac{Re}{v \cdot d}$
$V_{kp} = \frac{v}{Re \cdot d}$
$V_{kp} = \frac{d}{Re \cdot v}$

№150 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Pito trubkasi yordamida oqim tezligi qaysi formula orqali aniqlanadi?
$V = a\sqrt{2gh}$
$V = a/2gh$
$V = a\sqrt{2h}$
$V = \sqrt{2gh}$

№151 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Bernulli tenglamasida Koriolis koeffitsiyenti nima uchun qo`llaniladi?
Tezlik notekis taqsimlanishini hisobga olish uchun
Bosim o`lchashdagi xato uchun
Geometrik balandlik o`lchashdagi xato uchun
Pyezometrik bosim o`lchashdagi xato uchun

№152 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Real suyuqlik elementar oqimchasi uchun Bernulli tenglamasi qaysi javobda to`g`ri yozilgan?
$H_1 = H_2 + h_{1-2}$
$H_2 = H_2 + h_{1-2}$
$H_1 = H_2 - h_{1-2}$
$H_1 = H_2$

№153 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Bernulli tenglamasidan solishtirma potensial energiya qaysi javobda to`g`ri ko`rsatilgan?
$z + \frac{\partial}{\gamma}$
$\frac{\rho}{\gamma} + \frac{u^2}{2g}$
$z + \frac{u^2}{2g}$
z

№154 Fan bob 3 Fan bo`limi 1 Qiyinchilik darajasi 2

Oqimda kinetik energiya o`zgarishi qanday hisoblanadi?
--

$d\left(\frac{mv^2}{2}\right) = \Sigma P \cdot l$
$d\left(\frac{mv^2}{2}\right) = \Sigma l$
$\frac{mv^2}{2} = \Sigma P$
$d\left(\frac{mv^2}{2}\right) = \Sigma P$

№155 Fan bobi 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Bernullitenglamasini maniifodalaydi?
Oqimining to'liqsolishtirma energiyasi o'zgarishini
Nivelir balandlik o'zgarishini
Pyezometriknaporo'zgarishini
Solishtirma kinetik energiya o'zgarishini

№156 Fan bobi 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Diametri 180 sm bo'lgan trubada suv to'liq boqanda gidravlik radiusni magateng?
45
40
50
55

№157 Fan bobi 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Diametri 180 sm trubada suv to'liq boqanda uning ho'llangan perimetri qancha?
565,2
545,4

600
480

№158 Fan bobi 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Suyuqlikkabotirilganjismqachoncho'kadi?
$\gamma_{\text{жс}} > \gamma_c$ bo'lsa
$\gamma_a = \gamma_{\bar{n}}$ bo'lsa
$\gamma_{\bar{n}} > \gamma_a$ bo'lsa
$\gamma_c \cdot \gamma_{\text{жс}} = 0$ bo'lsa

№159 Fan bobi 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Bosimepyurasinimaniifodalaydi?
Birorsirtbo'ylabbosimtaqsimlanishini
Bosimkuchini
Yuzabo'ylabtezliktaqsimlanishini
Yuzamarkazidagibosimini

№160 Fan bobi 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Yuzaog'irlikmarkazidagibosimkuchinimagateng?
$\bar{P} = (p_0 + \rho gh_c) \cdot s$
$\bar{P} = p_0 s$
$\bar{P} = p_0 + \rho gh$
$\bar{P} = \rho ghs$

№161 Fan bobi 4 Fan bo`limi 1 Qiyinchilik darajasi 1

Gidropressda hosil qilinadigan kuch nimaga teng?

$$\bar{P} = \frac{a+b}{b} \left(\frac{d_2}{d_1} \right)^2 Q \cdot \eta$$

$$\bar{P} = \left(\frac{d_2}{d_1} \right)^2 \cdot Q$$

$$\bar{P} = \frac{a+b}{b} Q \cdot \eta \cdot d$$

$$\bar{P} = Q \cdot \eta \cdot a$$

№162 Fan bobi 4 Fan bo`limi 1 Qiyinchilik darajasi 1

Vakuummatrik balandlik qanday o'lchanadi?

$$h_{\bar{n}i} = \frac{\delta_a - \delta}{\gamma_{\bar{n}i}}$$

$$h = \frac{P_0}{pg}$$

$$h = \frac{P}{pg}$$

$$h_{cm} = \frac{P - P_a}{pg}$$

№163 Fan bobi 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Aylanayotgan idishdagi suyuqlik yuzasi tenglamasi qaysi javobda to'g'ri ko'rsatilgan?

$$\frac{\omega^2 \tilde{a}}{2} - gz = const$$

$$\frac{\omega^2 \tilde{a}}{2} = \text{consz}$$

$$gz = \text{consz}$$

$$\frac{\omega^2}{2} - z = \text{consz}$$

№164 Fan bobi 4 Fan bo`limi 1 Qiyinchilik darajasi 1

Bosimi teng yuzalar tenglamasi qanday aniqlanadi?

$$Xdx + Ydy + Zdz = 0$$

$$Xdx + Ydy = 0$$

$$Xdx - Zdz = 0$$

$$Xdx = 0$$

№165 Fan bobi 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Suyuqlik zichligi qanday hisoblanadi?

$$\rho = \frac{m}{v}$$

$$V = \frac{v}{G}$$

$$\rho = p \cdot v$$

$$\rho = \frac{v}{m}$$

№166 Fan bobi 4 Fan bo`limi 1 Qiyinchilik darajasi 1

Suyuqliklarkinematikqovushqoqligiqandaykattalik?

$$v = \frac{\mu}{\rho}$$

$v = \rho \cdot \mu$
$v = \frac{\rho}{\mu}$
$v = \tau \cdot \rho$

№167 Fan bob 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Gidrostatik bosim xossasi qaysi javobda to`g`ri ko`rsatilgan?
$p = f(x, y, z)$
$p = \frac{25}{z}$
$v = \tau \cdot \rho$
$\gamma = pg$

№168 Fan bob 4 Fan bo`limi 1 Qiyinchilik darajasi 1

Suyuqlik gorizantal yuzasi tenglamasi qanday ifodalanadi?
$gz = const$
$gz = \rho y$
$z = 0$
$g = 0$

№169 Fan bob 4 Fan bo`limi 1 Qiyinchilik darajasi 1

atezlanish bilan harakatlanayotgan idishdagi suyuqlik sathitenglamasi niko`rsating?
$ax + gz = const$
$gz = consz$
$gz = 0$
$ax = consz$

№170 Fan bob 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Gidrostatik mashinalar gamisollarkeltiring.
gidravlik press, gidraakkumulyator
turbinalar nasoslar
markazdanqochmanasoslar

№171 Fan bob 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Bosim markazibilanyuzaog'irlik markazi qachon ustma-ust tushmaydi?
Bosim ta'sir qiluvchi tekislik qiyabo'lsa
Tekislik gorizont al bo'lsa
Tekislik ixtiyoriy holatida
Tekislik suyuqlik ichidabo'lsa

№172 Fan bob 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Arximed qonuni qachon kashf qilingan?
Eramizdan 250 yil avval
Eramiz 1 asrida
Eramizdan 4000 yil avval

Eramizdan 400 yilavval

№173 Fan bobi 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Suyuqlikkabotirilganjismqachonturg'unbuladi?
Metamarkaz og'irlik markazidan yuqorida bo'lsa
Og'irlik markazi suv satkidan pastda bo'lsa
Metamarkaz og'irlik markazi bilan ustma-ust tushsa
Metamarkaz og'irlik markazidan pastda bo'lsa

№174 Fan bobi 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Qanday suyuqlik oqimi bosimsiz (naporsiz) oqim deyiladi?
Erkin yuzaga ega suyuqlik oqimi
Erkin yuzaga ega bo'lmagan suyuqlik oqimi
P va V o'zgarmas bo'lgan oqim
Faqat V o'zgarmas oqim

№175 Fan bobi 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Oqim asosiy gidravlik elementlari qaysi savolda to'g'ri ko'rsatilgan?
Harakat kesimi, suyuqlik sarfi, o'rtacha tezlik, gidravlik radius, ho'llangan perimetr
Bosimli oqim, beqaror harakat, uzluksizlik tenglamasi, gidravlik radius

Gidravlik qarshiliklar, napor yo'qotilishi, uzluksiz tenglamasi

Bosim, tezlik, ishqalanish kuchi, napor yo'qotilishi

№176 Fan bobi 4 Fan bo'limi 1 Qiyinchilik darajasi 2

Real suyuqlik butun oqim uchun D. Bernulli tenglamasi qaysi javobda to'g'ri ko'rsatilgan?

$$z_1 + \frac{p_1}{\rho g} + \frac{\alpha_1 v_1^2}{2g} = z_2 + \frac{p_2}{\rho g} + \frac{\alpha_2 v_2^2}{2g} + h_\omega$$

$$z + \frac{p}{\rho g} = \text{const}$$

$$z + \frac{p}{\rho g} + \frac{u^2}{2g} = \text{const}$$

$$z_1 + \frac{p_1}{\rho g} + \frac{u_1^2}{2g} = z_2 + \frac{p_2}{\rho g} + \frac{u_2^2}{2g} + h_\omega$$

№177 Fan bobi 4 Fan bo'limi 1 Qiyinchilik darajasi 2

To'liq napor (bosim) qaysi javobda to'g'ri ko'rsatilgan?

$$z + \frac{p}{\rho g} + \frac{u^2}{2g}$$

$$\frac{p}{\rho g}$$

$$z + \frac{p}{\rho g}$$

$$z + \frac{u^2}{2g}$$

№178 Fan bobi 4 Fan bo'limi 1 Qiyinchilik darajasi 2

Koriolis koeffitsiyenti qaysi javobda to'g'ri ko'rsatilgan?
$\alpha = \frac{\int dQv^2}{Qv_{yp}^2}$
$\alpha = \frac{H_1}{H_2}$
$\alpha = \frac{u^2}{2g}$
$E = \frac{\omega_c}{\omega_T}$

№179 Fan bobi 4 Fan bo'limi 1 Qiyinchilik darajasi 2

Gidravlik qiyalik qaysi javobda to'g'ri ko'rsatilgan?
$i = \frac{H_{1-2}}{l_{1-2}}$
$i = \frac{H_1}{H_2}$
$i = l \cdot H$
$i = \frac{l_{1-2}}{H_{1-2}}$

№180 Fan bobi 4 Fan bo'limi 1 Qiyinchilik darajasi 2

Suyuqliqandayoqimilaminaroqimdeyiladi?
Suyuqlikningkatlam-katlamharakati
Suyuqlikningtartibsizharakati
Suyuqlikningbeqarorharakati
Suyuqlikningbarqarorharakati

№181 Fan bob 4 Fan bo`limi 1 Qiyinchilik darajasi 1

Reynolds kritik qiymati ochiq o`zanlar uchun nechaga teng?
580
1320
2320
1460

№182 Fan bob 4 Fan bo`limi 1 Qiyinchilik darajasi 1

Hodisalar kinematik o`xshash bo`lishi uchun qanday shart bajarilishi kerak?
$\frac{v_1}{v_1^1} = \frac{v_2}{v_2^1} = \dots = \frac{v_n}{v_n^1} = const$
$l_1 = l_2 = l_3 = l_n = consz$
$\frac{v^2}{gl} = consz$
$\frac{Ft}{mv} = consz$

№183 Fan bob 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Truba devoridagi ishqalanish kuchi qanday hisoblanadi?
--

$\bar{T} = 2\pi\tau \cdot l \cdot \tau$ $\bar{T} = p \cdot ds$
$\bar{T} = 2\pi\tau$
$\bar{T} = \mu \frac{du}{dy}$

№184 Fan bob 4 Fan bo`limi 1 Qiyinchilik darajasi 1

Trubadagi laminar oqim vaqtida o`rtacha tezlik maksimal tezlikning qanday qismini tashkil qiladi?
$\frac{1}{2}$
$\frac{1}{4}$
$\frac{3}{4}$
$\frac{1}{3}$

№185 Fan bob 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Gagen-Puazeyl formulasi qaysi javobda to`g`ri ko`rsatilgan?

$$Q = \frac{1}{128} \frac{\pi \Delta p}{\mu l} d^4$$

$$V_{ypm} = \frac{4Q}{\pi d^2}$$

$$h_l = \frac{1}{d} \frac{v^2}{2g}$$

$$x_{dx} + y_{dy} + t_{dz} = 0 \quad h_M = \xi \frac{u^2}{2g}$$

№186 Fan bobi 4 Fan bo`limi 1 Qiyinchilik darajasi 1

Mahalliy qarshilikni qanday faktorlar keltirib chiqaradi?

Quvurdagi kran, birdan torayish, kengayish, burilish va x.

Ichki ishqalanish kuchi

Truba devori g'adir-budurligi

Trubaning eski yoki yangiligi

№187 Fan bobi 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Bord formulasi qaysi javobda to'g'ri ko'rsatilgan?

$$h_M = \frac{(v_1 - v_2)^2}{2g}$$

$$h_M = \lambda \frac{l}{d}$$

$$h_M = \frac{v^2}{2g}$$

$$h_M = \xi \frac{u^2}{2g}$$

№188 Fan bob 4 Fan bo`limi 1 Qiyinchilik darajasi 1

Kavitatsiya hodisasi nimaga bog`liq sodir bo`ladi?

Bosim kamayishi yoki temperatura ortishiga

Faqat bosim ortishiga

Bosim bilan temperatura birgalikda ortib ketishiga

Bosim bilan temperatura birgalikda kamayib ketishiga

№189 Fan bob 4 Fan bo`limi 1 Qiyinchilik darajasi 1

Suyuqliklarning oqib chiqishi uchun Torrichelli formulasi qaysi javobda to`g`ri ko`rsatilgan?

$$V = \sqrt{2gH}$$

$$V = \frac{Q}{\omega}$$

$V = \sqrt{Ri}$
$V = \sqrt{2g \cdot H}$

№190 Fan bob 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Suyuqlikni changitish uchun qanday naychalardan foydalaniladi?
forsunkalardan
drossellardan
klapanlardan qisqa trubalardan

№191 Fan bob 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Trubalar uchun tejamli diametr qaysi javobda to'g'ri keltirilgan?
$D = \sqrt{\frac{4Q}{\pi V_{OIT}}}$
$d = \sqrt{\frac{4Q}{\pi V_{YPT}}}$
$d = \sqrt{\frac{4Q}{\pi V_H}}$
$d = \sqrt{\frac{\pi V}{4Q}}$

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№192 Fan bob 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Sifon truba deb qanday trubaga aytiladi?
Bir qismi ta'minlovchi idishdan yuqorida bo'lgan truba
Suyuqlikka botirilgan truba
Ikki idishni tutashtiruvchi truba
Bir uchi kengaygan truba

№193 Fan bob 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Trubalardagi gidravlik zarbani birinchi marta kim o'rgangan?
N. E. Jukovskiy
L. Eyler
D. Bernulli
O. Reynolds

№194 Fan bob 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Markazdan qochma nasoslar qaysi tipdagi nasoslar guruhiga kiradi?

Dinamik ta'sir nasoslari
Hajmiy ta'sir nasoslari
Porshenli nasoslar
Diafragmali nasoslar

№195 Fan bobi 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Nasoslar quvvati qanday hisoblanadi?
$N_{\phi} = \gamma QH$
$N = \frac{Q}{\gamma H}$
$N = QH$
$N = \gamma H$

№196 Fan bobi 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Markazdan qochma nasoslarning harakteristikalari qaysi javobda to'g'ri ko'rsatilgan?
$H = f_1(Q), N = f_2(Q), \eta = f_3(Q)$
Q, H, d
Q, S, H, l
Q, l, S

№197 Fan bob 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Gazlarda nisbiy bosim o'zgarishi qanday ifodalanadi?
$\Delta P = \frac{P_1 - P_2}{P_1}$
$\Delta P = \frac{P_1 - P_2}{P_2}$
$\Delta P = \frac{P_2 - P_1}{P_1}$
$\Delta P = \frac{P_2 - P_1}{P_2}$

№198 Fan bob 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Gidravlik yo'qotish turlarini ko'rsating
Uzunlik bo'yicha va mahalliy qarshilik hisobiga yo'qotishlar
Uzunlik bo'yicha va tezlik pasayishi hisobiga yo'qotishlar
Kundalang kesim bo'yicha va tezlik pasayishi hisobiga yo'qotishlar
Tezlik pasayishi va mahalliy qarshilik hisobiga yo'qotishlar

№199 Fan bob 4 Fan bo`limi 1 Qiyinchilik darajasi 2

Suyuqlik barqaror harakati qanday harakat?
Oqim fazosi har bir nuqtasida P va V o'zgarmas bo'lgan harakat

Oqim fazosi har bir nuqtasida p va v t ga bog'liq o'zgargan harakat
Barcha tomondan qattiq devor bilan chegaralangan suyuqlik harakati
Faqat og'irlik kuchi ta'siridagi suyuqlik harakati

№200 Fan bob 4 Fan bo'limi 1 Qiyinchilik darajasi 2

Gidrostatikaning asosiy tenglamasi qaysi qonuniyatni ifodalaydi?
Suyuqlik ichidagi ixtiyoriy nuqtadagi bosim suyuqlik erkin sirtidagi bosim va shu nuqtadagi suyuqlik ustunining bosimi yig'indisiga teng
Suyuqlik ichidagi ixtiyoriy nuqtadagi bosim suyuqlik erkin sirtidagi bosimga teng
Suyuqlik ichidagi ixtiyoriy nuqtadagi bosim suyuqlik ustunining bosimiga teng
Suyuqlik ichidagi ixtiyoriy nuqtadagi bosim suyuqlik ustunining bosimiga teng

№201 Fan bob 4 Fan bo'limi 1 Qiyinchilik darajasi 2

Suyuqlik zarrachalarining o'zaro ta'siri natijasida qanday kuchlar vujudga keladi?
<i>ichki kuchlar</i>
<i>tashqi kuchlar</i>
<i>Sirt kuchlar</i>
<i>Massa kuchlar</i>

№202 Fan bob 4 Fan bo'limi 1 Qiyinchilik darajasi 2

ko'rilayotgan suyuqlikning har bir zarrasiga ta'sir qiladi va uning massasiga proporsional bo'ladi. Ularga og'irlik kuchlari va inersiya kuchlari kiradi. Bu qanday kuch?
<i>Massa kuchlar</i>
<i>Sirt kuchlar</i>
<i>tashqi kuchlar</i>
<i>ichki kuchlar</i>

№203 Fan bob 4 Fan bo'limi 1 Qiyinchilik darajasi 2

suyuqlikka boshqa jismlarning ta'sirini ifodalaydi (masalan, suyuqlik solingan idish devorlarining ta'siri, ochiq yuzaga ta'sir qilayotgan havo bosimi va hokazo). Bu qanday kuch?
<i>tashqi kuchlar</i>
<i>ichki kuchlar</i>
<i>Sirt kuchlar</i>
<i>Massa kuchlar</i>

Tuzuvchi:

“ Elektroenergetika” kafedrasi dossenti:

Voxidov A.T.