



Corps of Engineers in Iraq

Rebuilding Electrical Infrastructure

by Hugh Lowe



What's it like?

- ★ Have you ever reached up to scratch your ear and your ear lobe felt rough and scaly like alligator skin?

- ★ Have you walked out after lunch and the hot wind felt like holding the hair dryer straight at your face about six inches away with the temperature set on high?



What's it like?

- ★ Do you usually dump your shoes in the morning or look under the bed covers before getting in at night to check for scorpions, camel spiders, gademas or vipers?
- ★ Do about half the guys you work and live with carry AK-47's and have an RPG launcher stashed back in their room in case the situation gets touchy? If so, then you have some idea of what its like to live in Iraq.



Why go to Iraq?

Could it be for the scenery?



Why go to Iraq?

- ☀ People have asked me why would you ever want to go to Iraq?
- ☀ My son thought I was crazy
- ☀ . My wife told me I should rethink my decision.
- ☀ My co-workers looked at me like I had really gone off the deep end this time.



So, why go?

- ✦ So why would I go to Iraq?
- ✦ I felt like I supported the President's decision to change the regime there and that now I owed a debt to the ordinary Iraqi citizen to help put their country back in order.
- ✦ I felt like I had the skills and experience that would be useful in this country where the electrical infrastructure had been decimated.
- ✦ As a student of the Bible, I wanted a chance to possibly see the ancient city of UR where Abraham was raised, or to see the site of the Garden of Eden.



Why go?

- ✦ Jeremiah 29: 10

- ✦ The truth is this: You will be in Babylon for a lifetime. But then I will come and do for you all the good things I have promised, and bring you home again. For I know the plans I have for you, says the Lord. They are plans for good and not for evil, to give you a future and a hope.

Abraham's monument at Ur



09.11.2004

Obligatory Camel Photo



Camel Spider



Obligatory Cleric Billboard Photo



Not the UGLY Truck





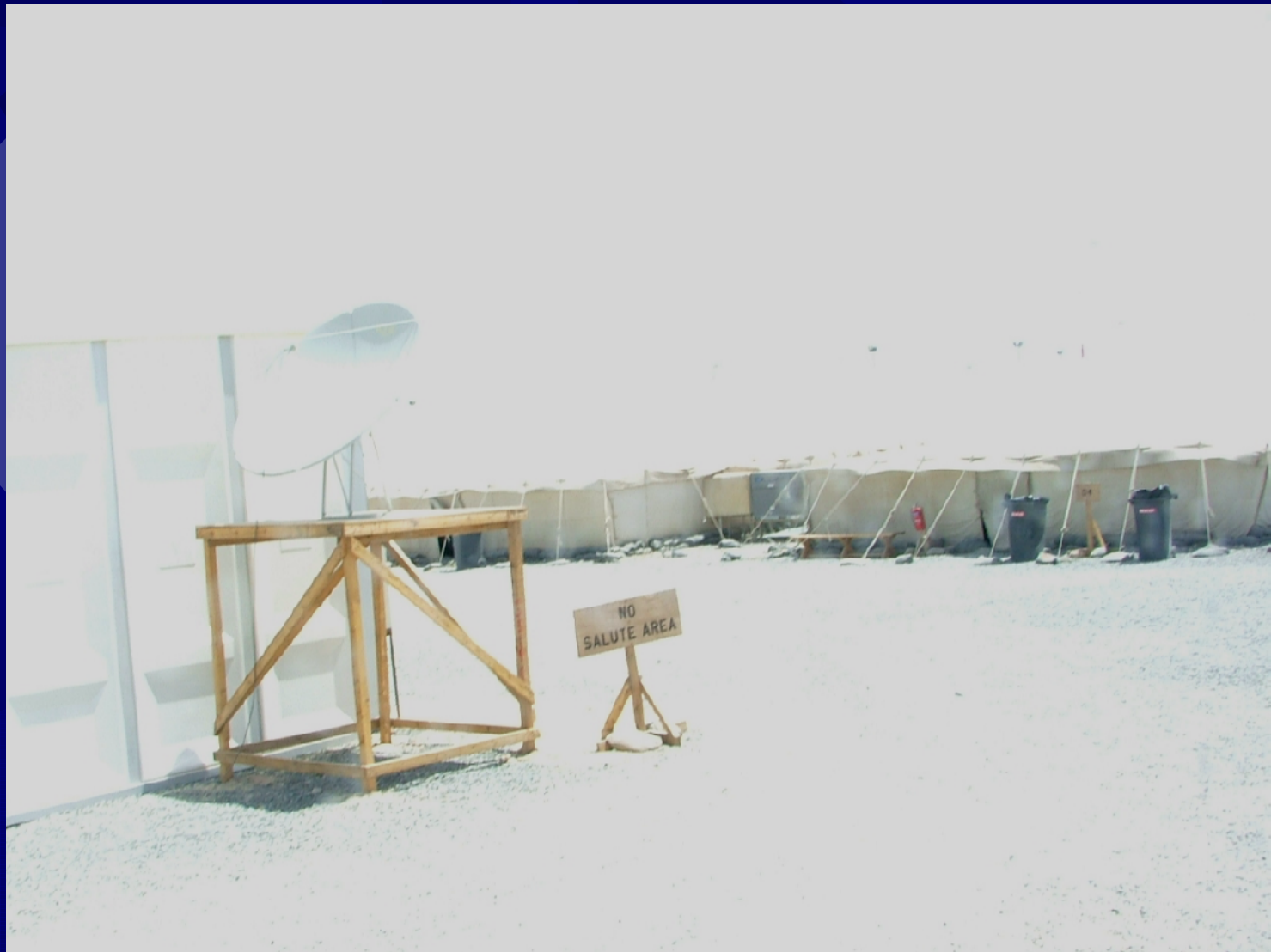
Fort Bliss, TX Firing Range



Frankfort, Germany



Camp Wolverine, Kuwait



Basrah International Airport, Iraq



Basrah International Airport, Iraq





My new branch chief said -

- ✦ I'm sending you to

- ✦ Buzurgan

- ✦ You're going to love it.

Amarah



Irrigation Project



Heat Problems in Iraq?



Buzurgan



Buzurgan to Amarah 138-kv



Buzurgan to Amarah 138-kv



Buzurgan to Amarah 138-kv



Buzurgan to Amarah 138-kv



Buzurgan to Amarah 138-kv



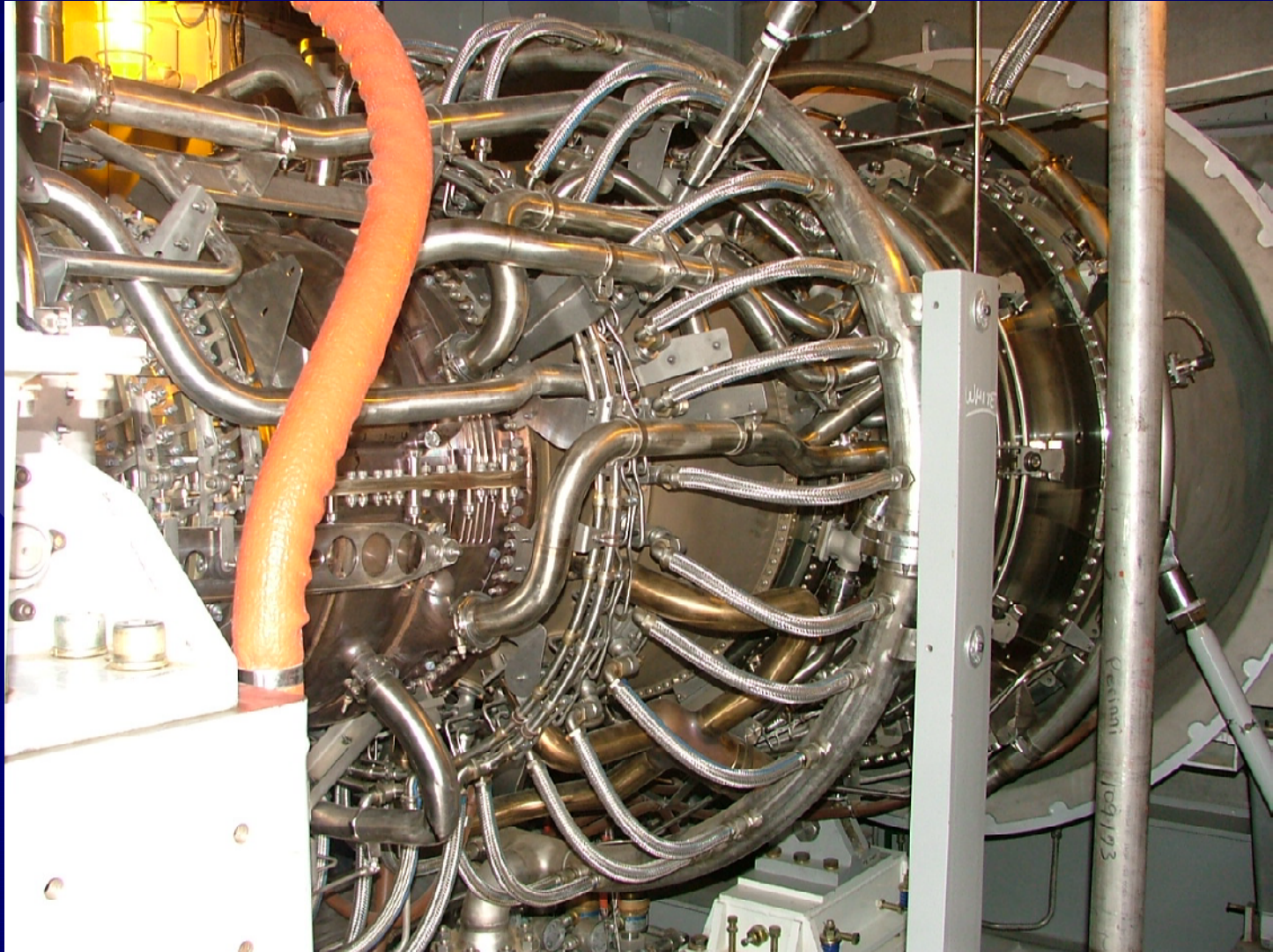
☀ Buzurgan Electric Generating Station



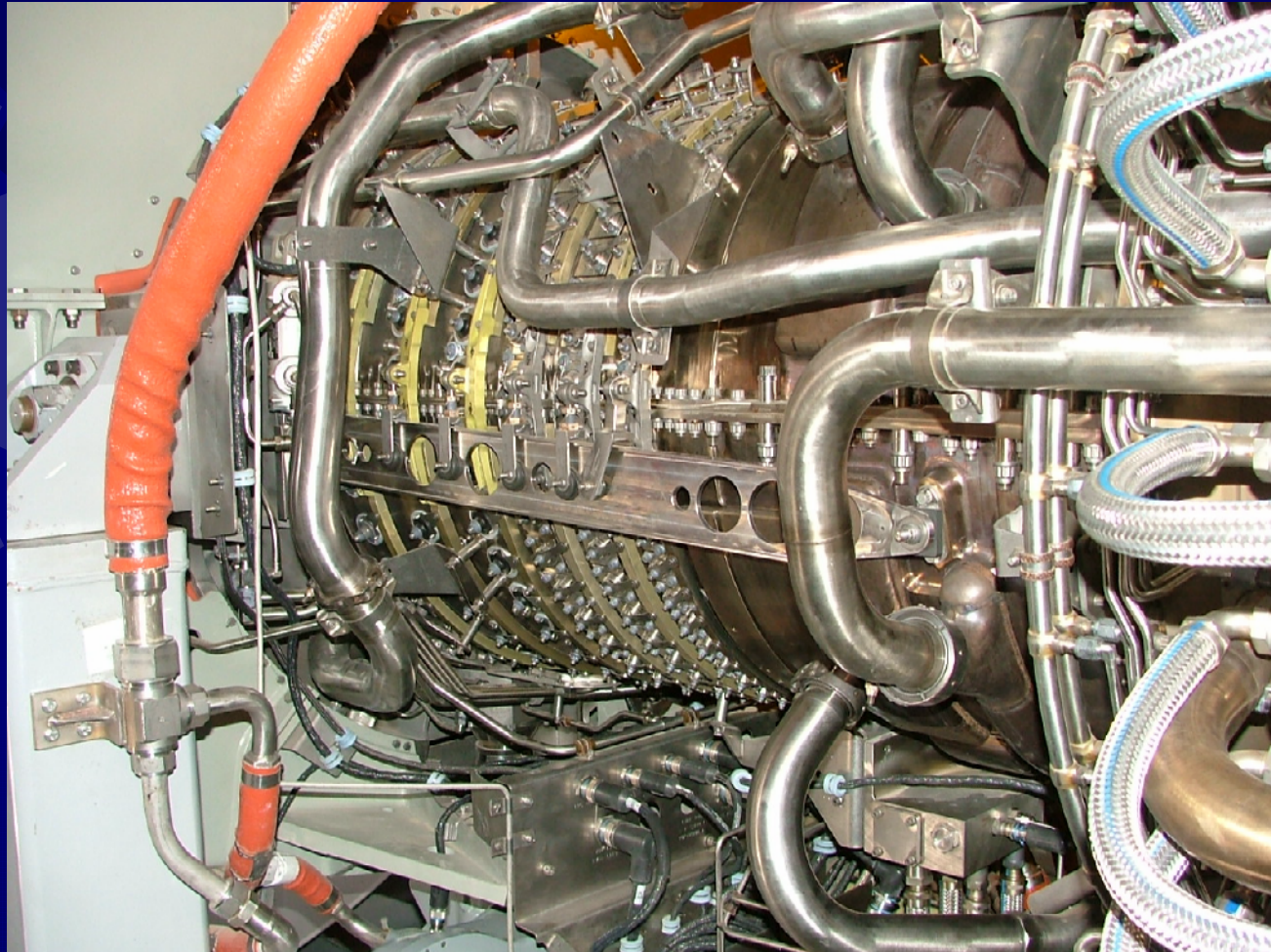
Buzurgan

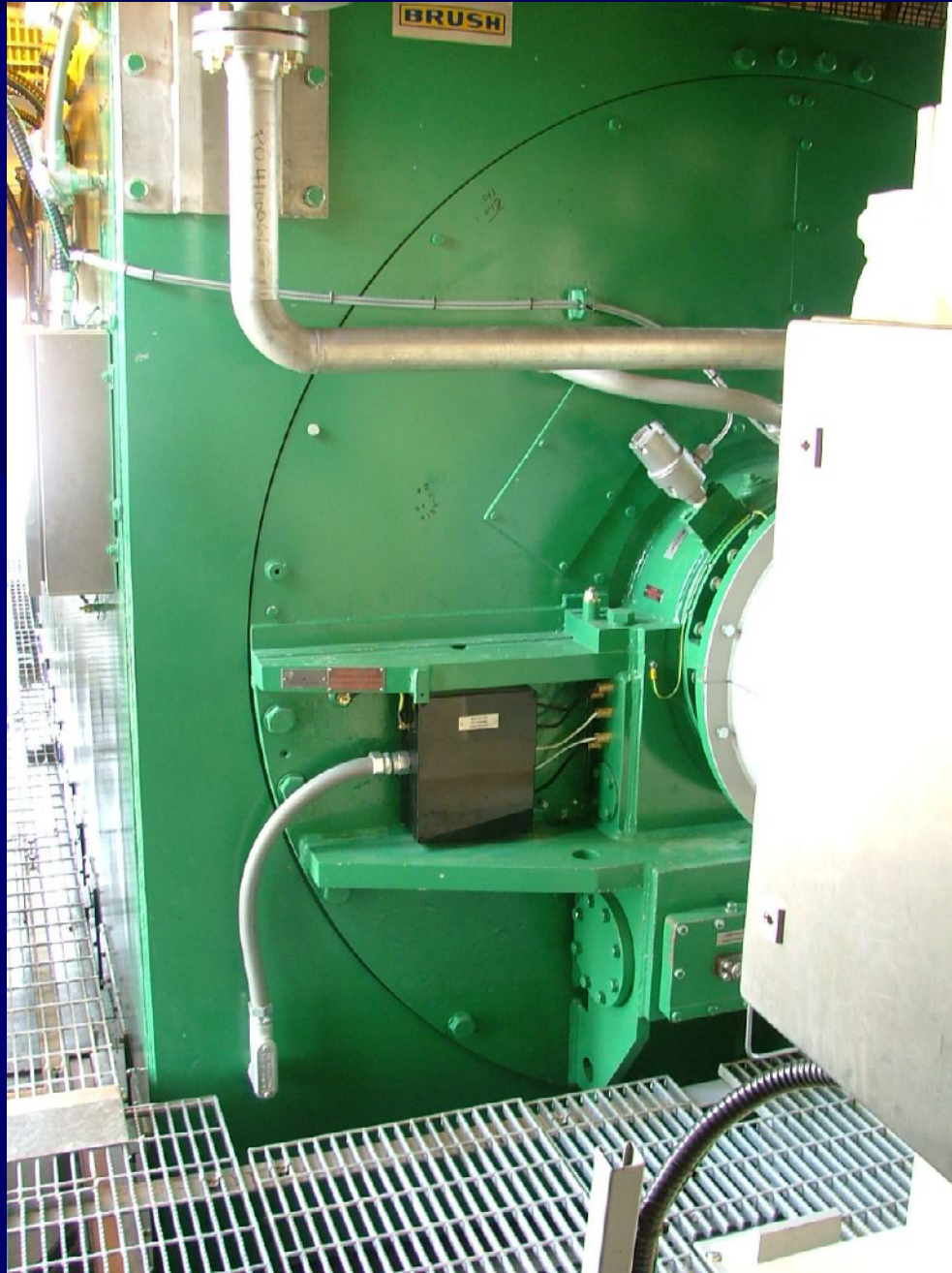


Buzurgan



Buzurgan





Buzurgan



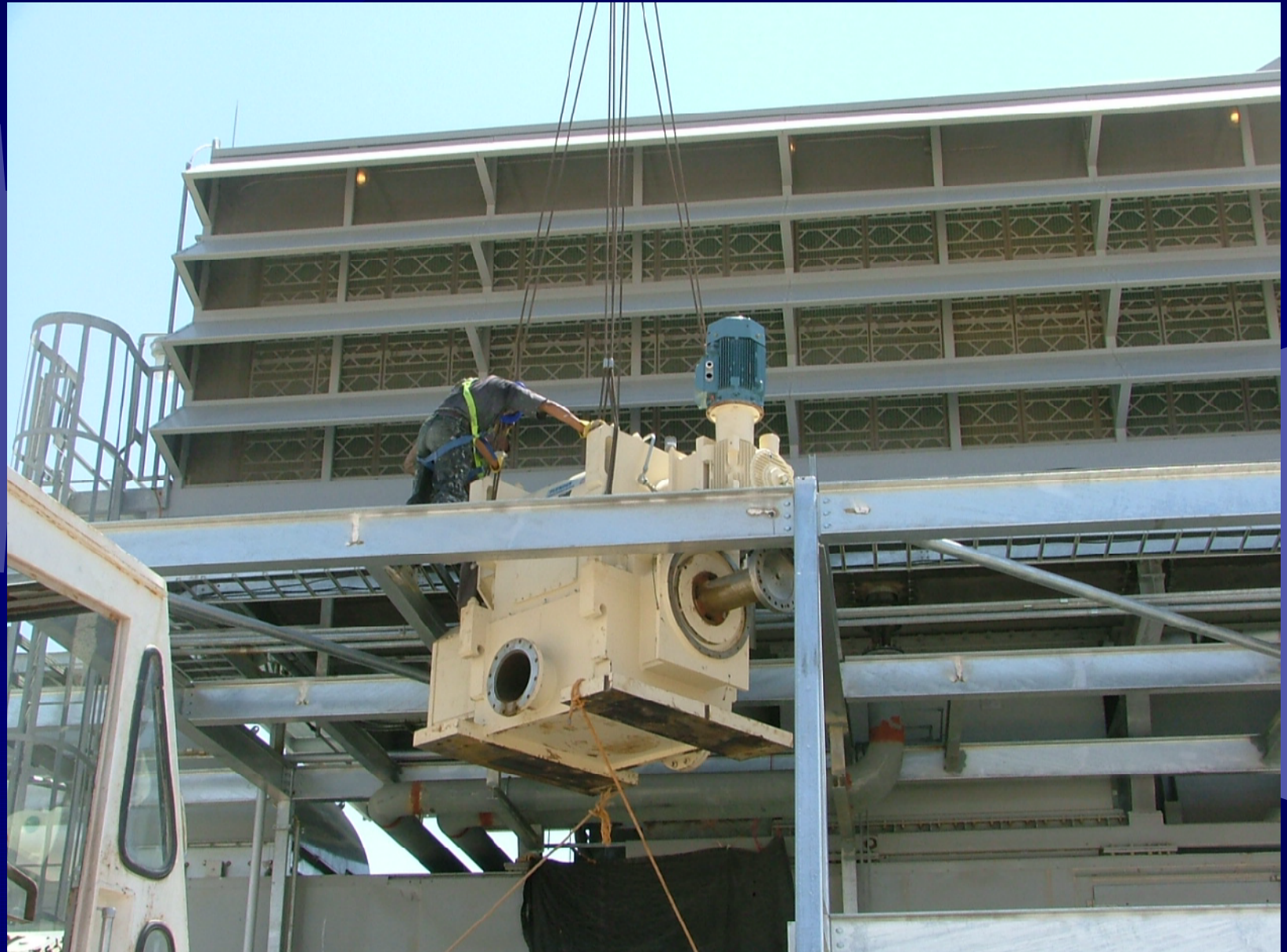
Problems

- ✦ Gear Box
- ✦ Transmission voltage: 100-150 kv
- ✦ Relay wiring errors
- ✦ Inadvertent input to relays
- ✦ Vibration at the generator input shaft
- ✦ Sabotage to the oil industry
- ✦ Relays installed in outdoor cabinets
- ✦ SF-6 circuit breakers
- ✦ Personalities
- ✦ Ethics of Iraqi contractors
- ✦ Gas Compressor motor overheated

Buzurgan Gear Box



Gear box install



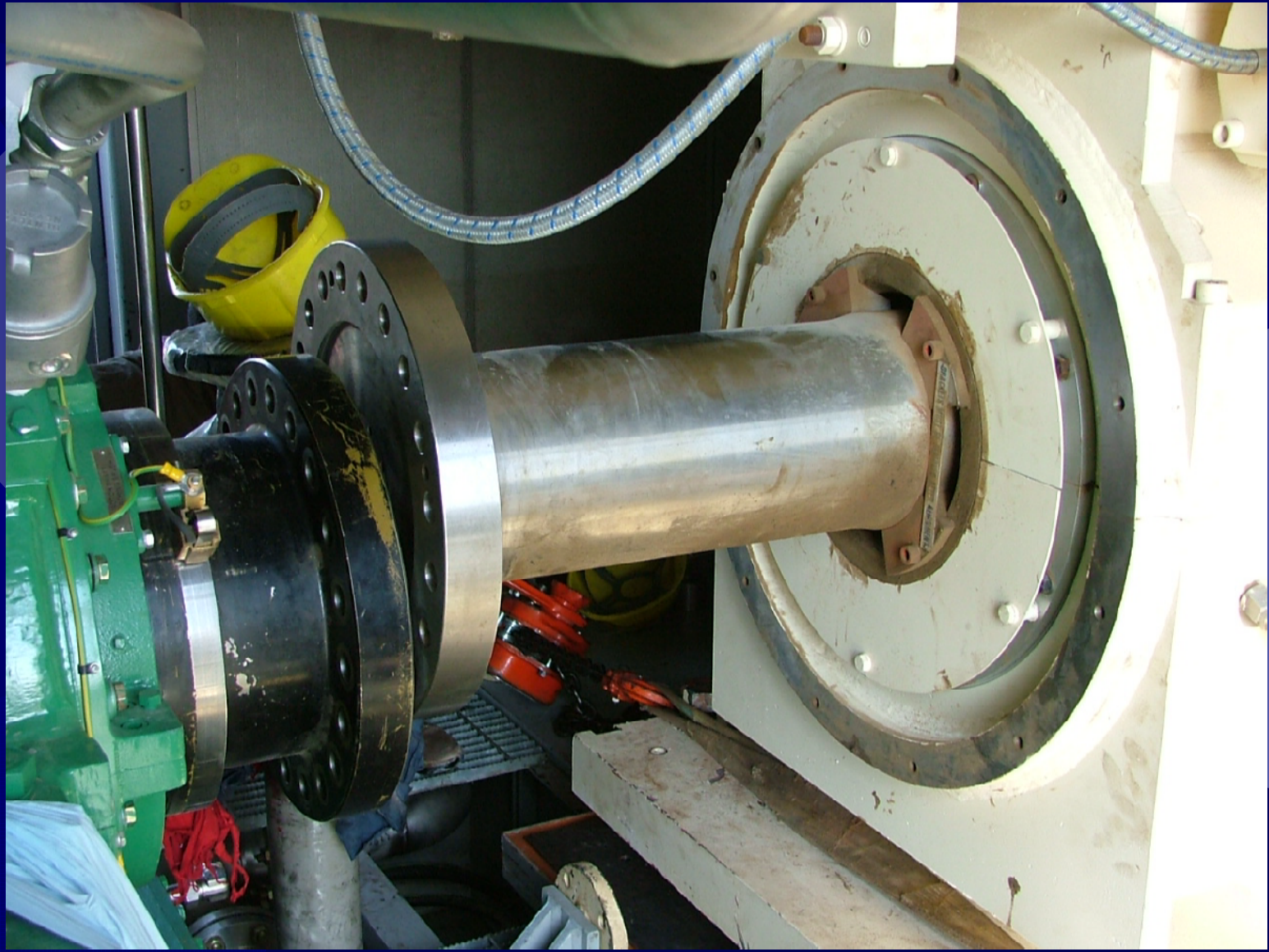
Sliding gear box into package



Ooops



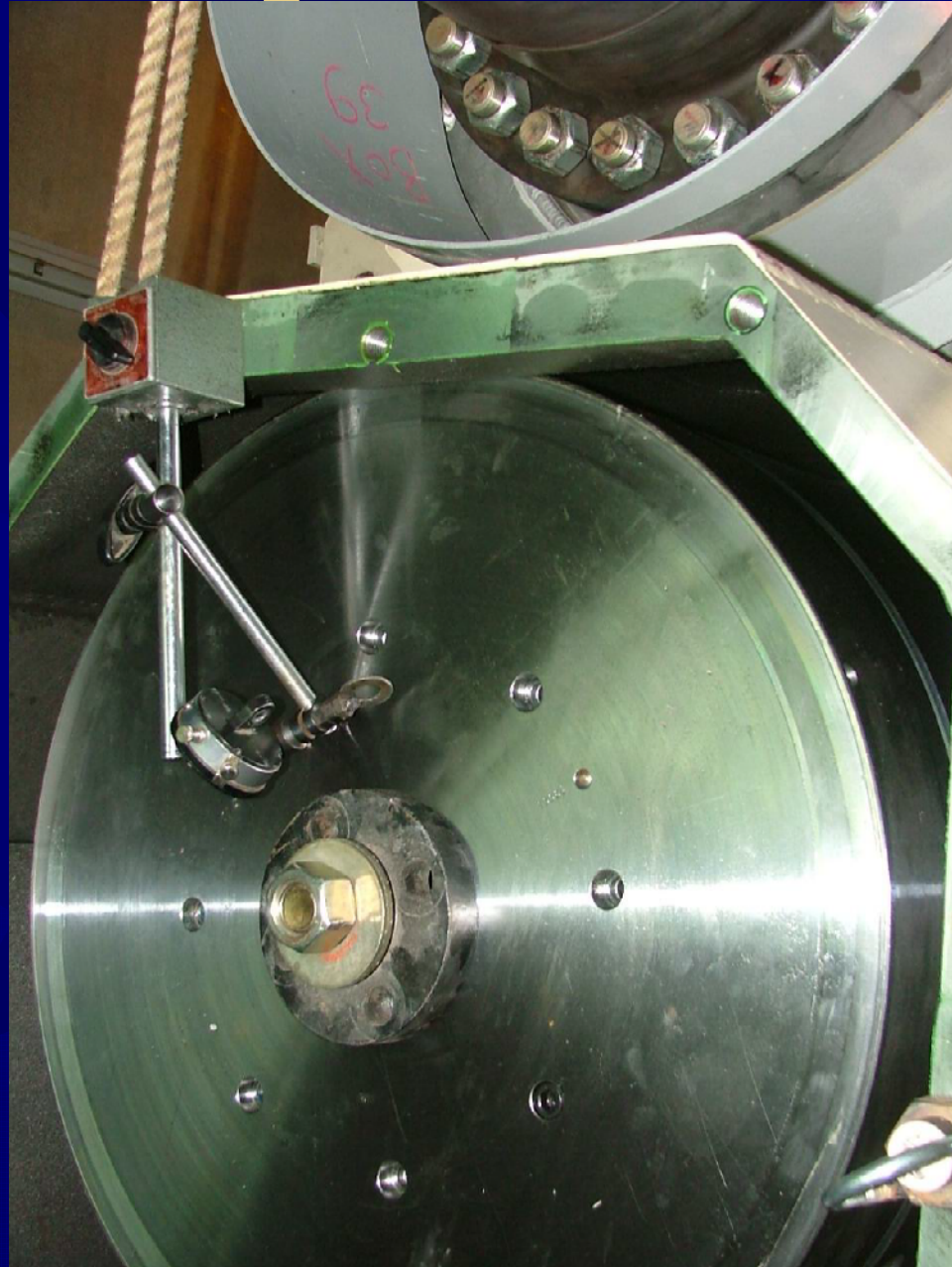
We've got a long way to go before we get alignment



Nobody told us---



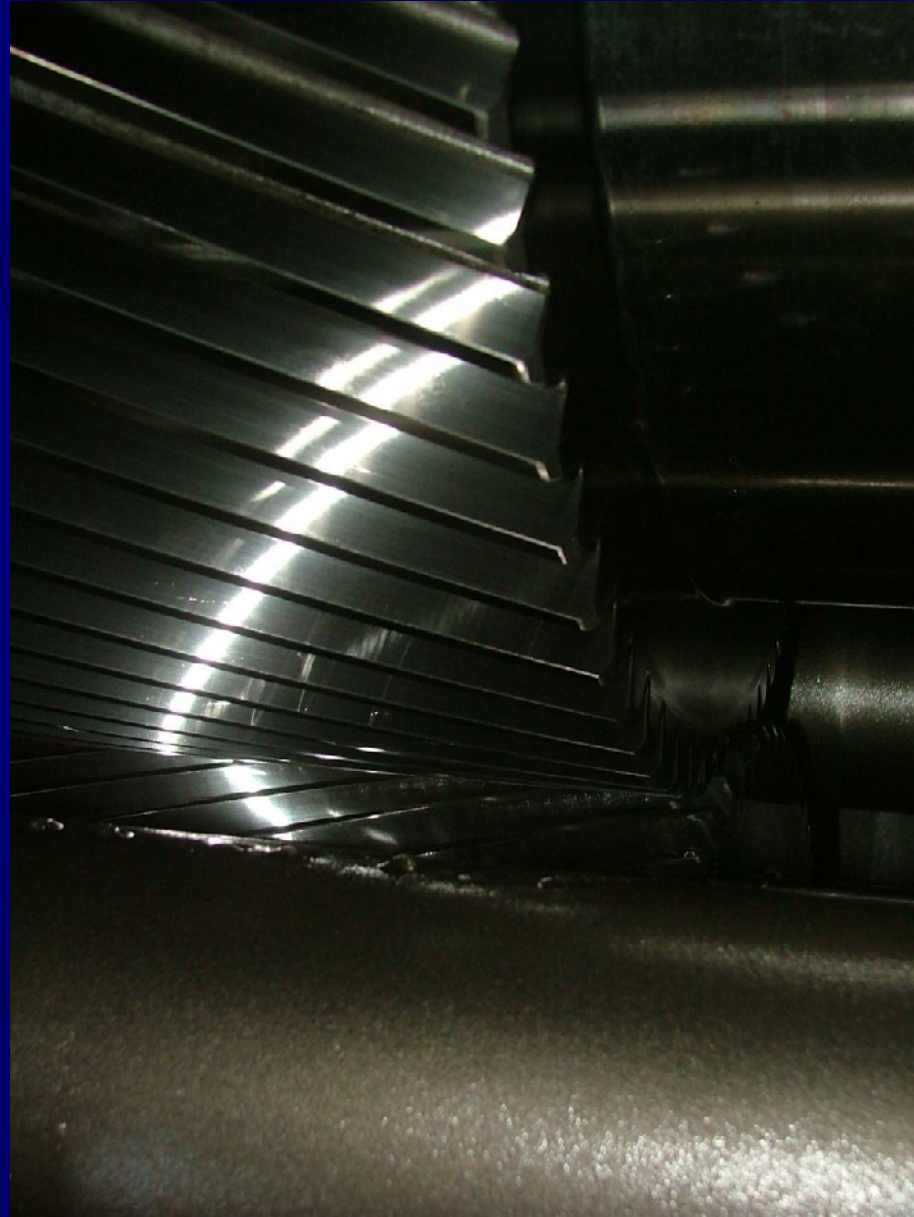
Gear box alignment



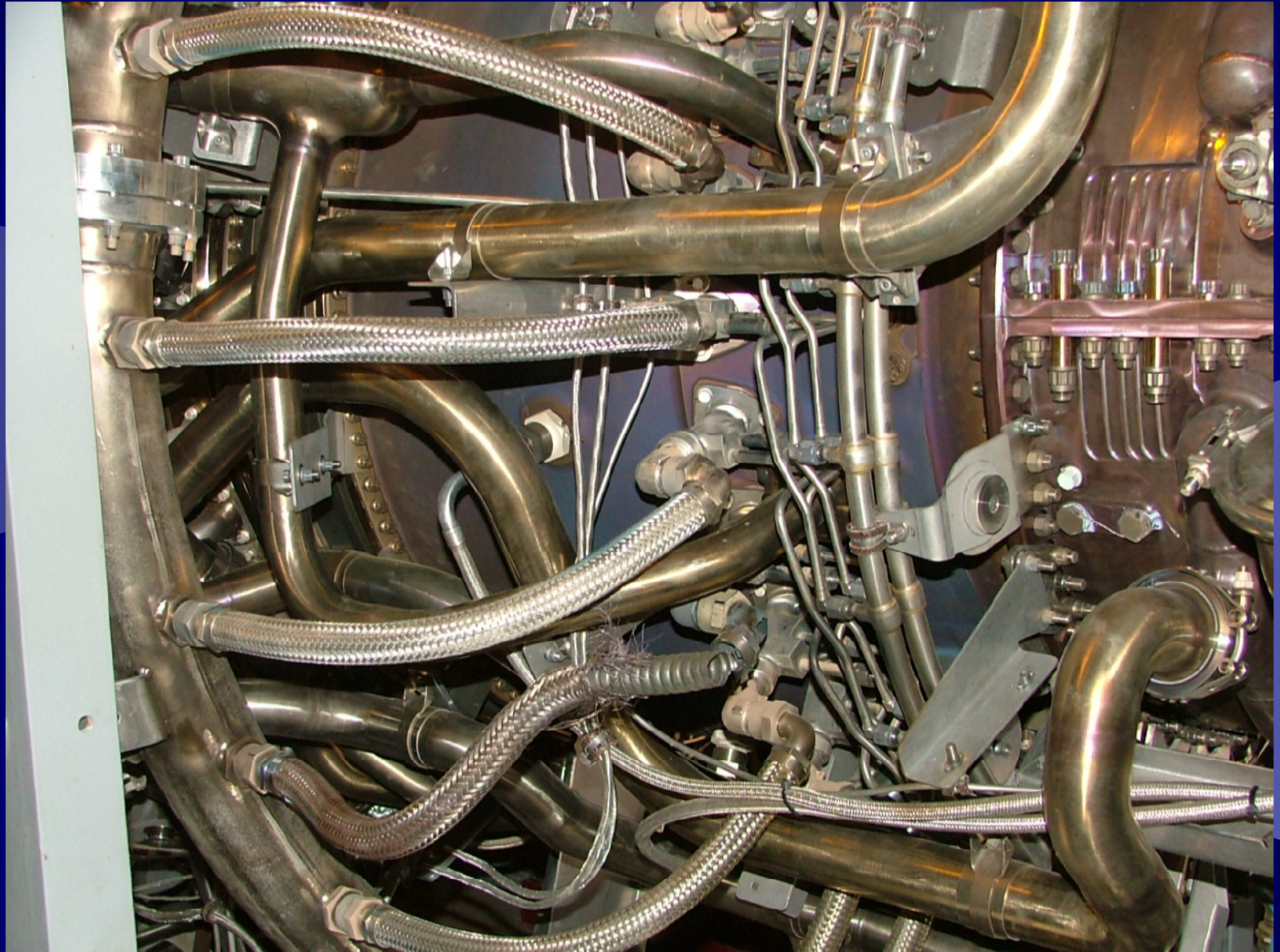
Having this clearance saved a lot of sheer tubes.



Gear Mis-match



BANG



Dual fuel nozzles



Chillers to cool combustion air



Top view of chiller banks



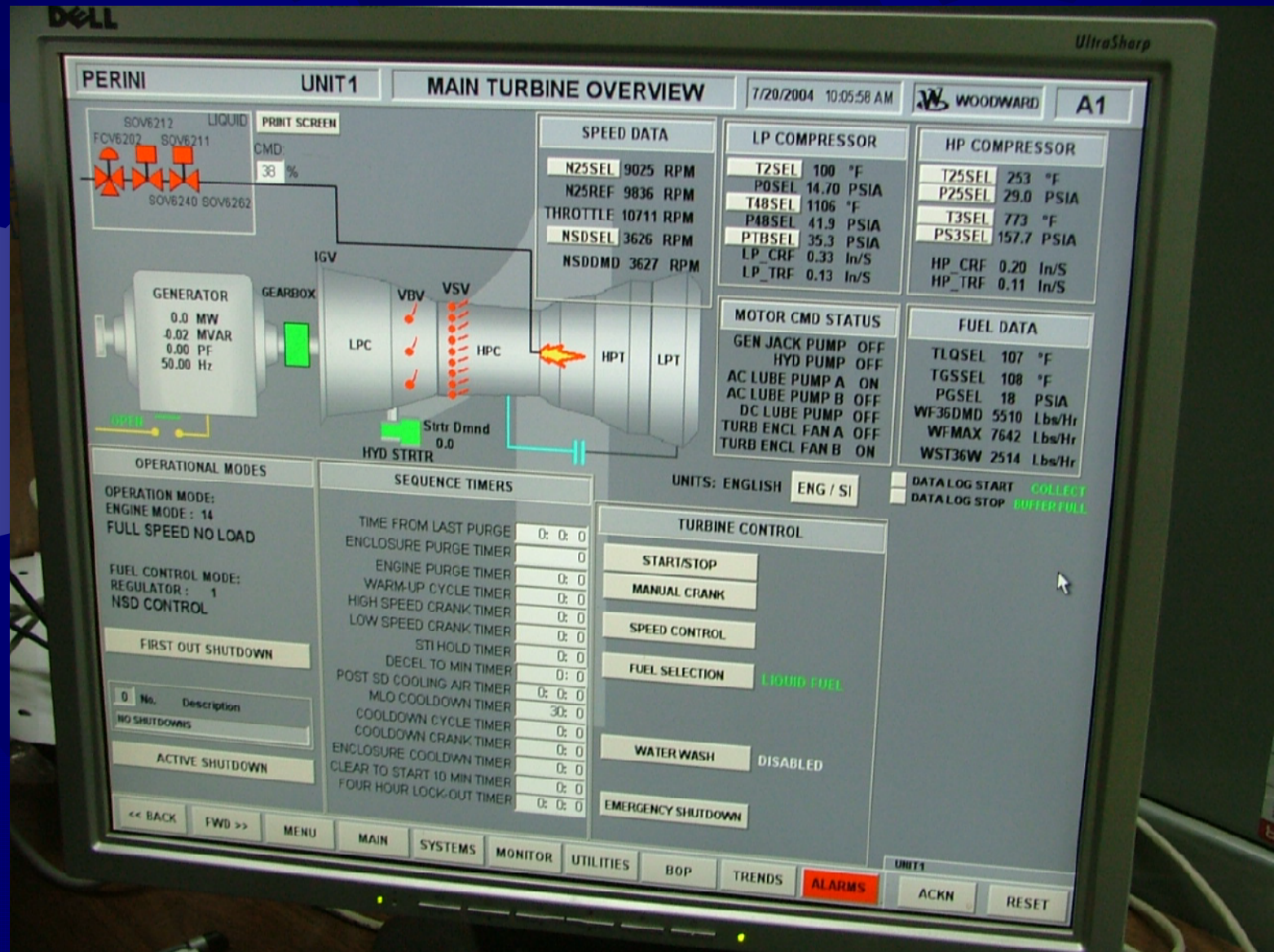
Air Filter and Heat Exchanger



Tank farm for water & diesel fuel



PLC Control Screen



Gas Compressor Motor



2000-HP Motor toasted



Gas compressor motor bearing



- ✦ Discoloration on the shaft.



Babbit Debris

Nasiriyah



Nasiriyah – Let's see if we damaged anything by defeating the four-hour lock out!



Houston – I think we have a problem



Uh-oh



09.26.2004

Do you think there's anyway to cover this up?



09.26.2004

On line and producing power



International effort



Buzurgan



Thank Heaven for Concrete Roof



In spite of the problems, we had some fun



Iraqi Desert Fox



Smoking the water pipe



Nimrod crew



Brits meet with Ministry of Electricity



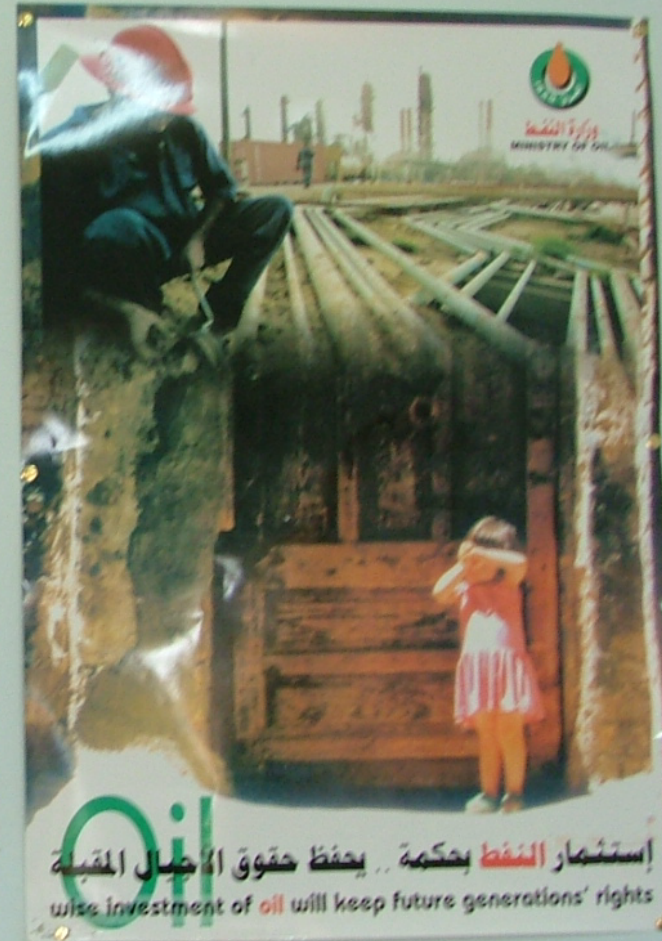
Kids: The Future of Iraq



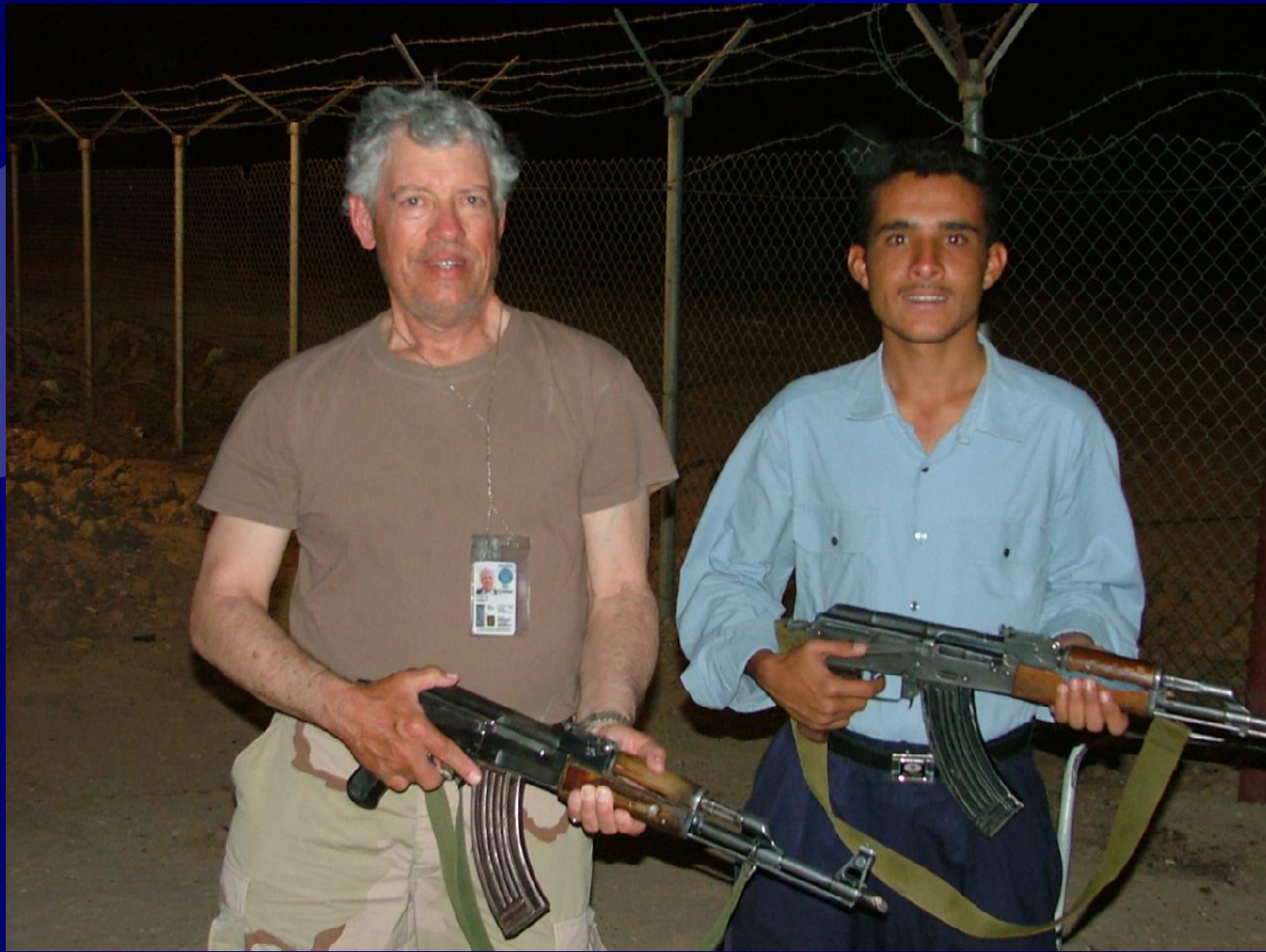
Needing a helping hand



Southern Oil Company Poster



Insurgency suppression team



Ackmed and Hyter guarding our camp



Family Photo



29 June 2004



Iraqi Freedom Day



Appreciation!





Questions?