Spotting the hazards and finding ergonomic solutions
What’s it all about?

The aim of this presentation is to show you how ergonomics can help you to work safely, efficiently and with less chance of injury.

Click here to move on...
ERGONOMICS OFFSHORE

How will it do this?

- The presentation is organised by areas of the platform and types of operation carried out.

- Hazards are highlighted and ergonomic solutions are suggested.

- You should be able to take this information with you and apply it to your work for your benefit.

Click here to move on...
How do I move around the presentation?

- The sections are listed on the left of each slide and you can click on the list to jump between them.

- Click on the buttons at the bottom of each page to move to the last slide viewed or the next in line. Try it now...
Ergonomics is about fitting the tools, jobs, workplace ... to YOU!

The overall aim is to reduce injuries & accidents and make the job more efficient & easier to do.
Example 1: Adapting the working height with a platform for a better posture.
Example 2: Putting an extended pipe on the gas testing cylinder to save carrying it up to the gas detector.
What is ergonomics?

... adapting the equipment and the workplace to make the job safer and easier to do

- that is ergonomics!
By far the most common injury is a sprain. These account for $\frac{1}{3}$ of all types of injury.
What causes most injuries?

- Slip/trip/fall: 55
- Handling: 47
- Hand tools: 25
- Machinery: 10
- Falling object: 10
- Crane ops: 5

No. of over 3-day injuries
Most over 3-day injuries are caused by:

- manual handling
- slips, trips & falls
- using hand tools

Together these account for about 70% of injuries!
Which operations cause most injuries?

- Deck operations: 44
- Maintenance: 41
- Drilling/workover: 22
- Domestic/catering: 20
- Production: 10

Deck ops & maintenance are where most injuries occur.
Which of these do you enjoy?

walking  football

gym  family life

running

golf  DIY

Think how they would be affected if you had an injury...
So how do we prevent these types of injuries?

- By using good ergonomics!
- By changing the way you work.
Think of those days spent working at floor level, bent double...
How work affects injuries

... carrying equipment up and down stairs
... lifting something on your own when it might have been better with two of you
At the end of your shift, do you get...

sore back, aching arms?

If you do, you could be doing yourself harm. Don’t just live with it - do something about it!
The idea is to think *differently* about the way you work.

Work offshore doesn’t have to be tough, heavy and strenuous.

And you don’t have to be soft to work differently!
Your first thought is probably:
“bend your knees, keep your back straight!”
Ergonomic hazard spotting

- Manual handling

... sometimes you can...

Problems & solutions

- Manual handling
- Slips, trips & falls
- Poor posture
- Difficult access
- Difficult to use equipment

What is ergonomics?
Accidents offshore
What’s in it for me?
How work affects injuries
Hazard spotting

ERGONOMICS OFFSHORE
...but it’s not always that simple - there’s more to it than lifting technique.

The very nature of many installations can make it difficult to practice safe handling.
Ideally: avoid all heavy and awkward manual handling.

Or you need to find ways to reduce the risk:

Change the load, or change the work area.

Improve the technique used to handle it.
Ergonomic hazard spotting

How can you change the load?

- Reduce the **size** of the load (split it, or see if it’s available in smaller quantities)

- Make it easier to **grip** - handles, hooks, straps

- **Stabilise** it - stop sudden movements

- **Cover** any sharp edges, greasy surfaces (so it’s easy to hold close to you)

**Manual handling**

What’s in it for me?

What is ergonomics?

Accidents offshore

Hazard spotting

- Manual handling
- Slips, trips & falls
- Poor posture
- Difficult access
- Difficult to use equipment

Problems & solutions
How can you change the work area?

- Improve lighting.
- Make the floor surface as even and uncluttered as possible.
- Put up protection against weather (wind, rain, etc.).
And to help yourself ...

- Wear the necessary **PPE**.
- Assess your **ability** to do the job.
- Use **good handling** techniques.

**Manual handling**
And to help yourself ...

- Take your time.
- Work with your team.
- Take breaks.
- Report any problems.
These are the most common cause of injury - about 1 in 3.

And yet they are mostly avoidable! They tend to happen when you rush or cut corners.

E.g. not keeping one hand on the rails.
Ergonomic hazard spotting

What happens?

It is usually the *sudden accident* that results in broken bones, bruising, concussion.

Some of the worst injuries happen following these *unexpected* events.
Slips, trips & falls

We are often unaware that massive forces can act on our body as we slip, trip or fall. The effect is made worse by the sudden shock of it.
What are some of the causes?

- **Steps**, ramps, ridges.
- Differences in **sizes** of steps.
- **Loose** floor surfaces.
- **Wet**, greasy, polished floors.
- Poor **lighting**.
Slips, trips & falls

So what can you do?

Look around you, be aware of obstacles:

- Report them, remove them.
- Don’t create them.
- Mop up spills.
Slips, trips & falls

So what can you do?

- Put up warning signs.
- Paint stripes to highlight hazards on floors.
- Be extra careful if you are carrying something.
- Put ramps over ridges.
- Wrap coloured tape around obstacles.
How you go about your work can have a big impact on the chances of you being injured. You should not expect to suffer from aches and pains - you can help to avoid them!

- Poor working posture

Ergonomic hazard spotting
Look around you at people’s postures:

- The way they **pick up** their bags.
- How they **sit** at meal times.
- How they **sit** at the computer.
- How they **reach** for high controls.
What is ergonomics?

Accidents offshore

What’s in it for me?

How work affects injuries

Hazard spotting

- Manual handling
- Slips, trips & falls
- Poor posture
- Difficult access
- Difficult to use equipment

Problems & solutions

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Ergonomic hazard spotting

- Poor working posture

Think of your own daily routine, from when you get out of your bed, until the end of your shift.

The more your back is bent over, the greater the strain on the discs, muscles, etc.

And the longer it goes on, the more likely your back is to be injured.
A ‘poor working posture’ is when any part of your body is not held in its resting position:

- **Arms** held away from the body - raised up, forward, to the side.
- Bending the **neck** - forward, back, sideways.
- Bending the **back** - usually forward.
- Standing with **legs** in awkward positions.
What can you do?

When you pick your bag up ...

... how good is your back posture?

If these extreme postures can be designed out, the risk of pain or injury is reduced.

First - admit you may not always have the perfect posture ...

When you pick your bag up ...

... how good is your back posture?
Some immersion suits seem to be designed for contortionists!

So get someone to give you a hand - don’t struggle!
Some tasks require you to stand or lean awkwardly ...

- Poor working posture
... other times, it's how you choose to work ...

... taking the quickest, 'easy' option, instead of thinking first and doing it well.
So, think about your job ...

- The better your **posture** (of your back, arms, neck) - the longer you can remain pain-free.
- Where possible work in the most relaxed, comfortable posture.
- Think of ways it could be improved e.g. better layout, putting up scaffolding, using different tools/equipment.
Sometimes you cannot find a good position to work in - because the problem is *how the plant is set out*.

e.g. valves are not always easy to see, let alone reach and operate.
The result is that you end up being the one who has to compromise.

The layout of a control panel or console, like in the control room and drill shack - is not always ideal.
What’s in it for me?

Difficult access to plant and equipment

So what can be done?

- The best solution is for it to be avoided in the first place.
- Change the way the job is done, how equipment and tools are used and how often.
- Don’t forget about maintenance and repair work.
Difficult access to plant and equipment

Some problems and solutions to difficult access... put a control panel in which can be easily seen and used.
Difficult access to plant and equipment

Think about *how* the equipment/machinery will be used, and *by whom*...

...a bit high, perhaps...

...a bit low?
Difficult access to plant and equipment

If you’re going to need steps ...

...get them the right size!
What is ergonomics?
Accidents offshore
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How work affects injuries
Hazard spotting
• Manual handling
• Slips, trips & falls
• Poor posture
• Difficult access
• Difficult to use equipment

Problems & solutions

Difficult access to plant and equipment
With storage, make sure it’s easy to get at items...
An awkward posture is not the only way you injure yourself.

14% of injuries were caused by using hand tools in 2000/01.

Why was this?
The equipment has to be right for the job... but it should be right for the users too.

A lot of tools and equipment are 'offshore-proof'—almost indestructible, but this means they are also heavy, bulky and unwieldy.
When selecting equipment, consider:

- **Where** it will be used?
- **Who** will be using it?
- **For how long**?
- **How often**?
Problems and their ergonomic solutions

This next section aims to give you the **ergonomics tools** to help you make a difference in your job.

Some of the **hazards** you may come across will be highlighted, and some **ergonomic solutions** are suggested.

Examples from different areas of an installation are given in the following sections.
The following areas are covered:

- Process plant
- Drill floor & rig (drilling)
- Control Room
- Helideck
- Crane cab
- Scaffolding
- Paint spraying
- Abseil work
- Wire line deck
- Offices
- Galley
- Cabins, laundry

(Clicking on 'More...' at the end of the list to the left will display the second set of areas as detailed above)
The main ergonomics issues are:

- Manual handling
- Slips, trips & falls
- Working posture
- Access to plant
- Equipment that is difficult to use
Larger pieces of equipment or plant will probably be moved by crane. But you still have to get things to their final position.

Don’t rely on brute force - use equipment e.g. trolleys, slings, and involve as many people as necessary.
To move smaller items/parts - you need to decide if you should do this by hand, or use equipment. You may need help.

e.g. moving panels of grating
If you need to use a step ladder for easier access, make sure it is suitable and safe.

Your boots may be wet and greasy.

So, it may be helpful to put non-slip tread on the rungs.
It can be difficult to work in a comfortable position, especially where space is tight.

Try to avoid working bent over, at floor level, for example.

Raise your working height - e.g. use scaffolding.
Problems & solutions

Process plant – poor working posture

If you can’t improve your posture - limit the time spent in it:

- Take regular breaks
- Change your position
- Share the work with others
Where space is tight, valves, controls, etc. may be hard to get to...

...which means you may climb over equipment, reach with outstretched arms, stand on tiptoe, and so on. This increases your risk of injury - made worse by oil on your boots, trip hazards, poor lighting, etc.
Look at the tools and equipment you are using.

Now look where and how you use them.
Problems & solutions

❖ Process plant – difficult to use equipment

Ask yourself ...

❖ Is the equipment suitable for the task?
❖ Are the tools easy and comfortable to use?
Process plant – difficult to use equipment

Good tools and equipment will be designed to minimise:

- force
- repetition
- weight
- vibration

...and will therefore be safer, easier and more comfortable to use.
Q. Is it better to use manual effort or a powered tool?

A. It depends!

A powered tool will do the job quickly, with less effort & take the strain off you.

But...

...it may be heavier to hold, cause vibration, make excessive noise, be larger and awkward to use.

You must decide which is more appropriate.
The main ergonomics issues are:

- Manual handling
- Slips, trips & falls
- Working posture
- Equipment that is difficult to use
- Access to plant
- PPE
Drilling – manual handling

There can be heavy, awkward handling in this area.

In chemical mixing there can be repetitive handling of 25 kg sacks.

Unloading the pallet gets progressively harder as the stack gets lower.
Another problem is the height of the hopper - compare these two photographs:

The one on the left is better - the other is too high.
Drilling – manual handling

The higher you have to lift the bag (above waist height) ...

... the more strain on your arms and shoulders.
Some solutions to these problems are:

- **Reduce the weight** of the bags
- **Use a scissor-lift table for pallets** - improve working height
- **Put a platform in** for the person to stand on to improve reach the hopper
- **Use good handling technique**
Drilling – manual handling

Emptying the contents of drums into the sump can be difficult.

Drums can weigh nearly 200 kg, and are not easy to hold.

- Using a pump means you could leave the drum on a pallet - much easier.
Problems & solutions

Drilling – manual handling

One of the more strenuous tasks is handling the slips.

They are near the ground, so it’s hard not to bend your back.
The ideal answer is to use mechanical equipment. But iron roughnecks are also heavy equipment.

Where possible, hydraulics should be used.
Pigs can’t fly... so to take some of the strain out of moving them and use a winch/pulley system...

...or adapt the area e.g. build a platform for a better working height.
Drilling – slips, trips & falls

Be aware of trip hazards - pipes, grating, mats, pallets

Keep areas clear and tidy.

Create space to move, especially when handling, e.g. drums and sacks.
Drilling – slips, trips & falls

You need **space** to do this job safely. Make sure you can move easily between the bags and the hopper.

Don’t be tempted to put the pallets too close - you may trip over.
Drilling – slips, trips & falls

Check that there are no other obstructions - like on the hopper itself.
Some examples of poor working posture are:

**Drilling – poor working posture**

Handling with straight legs and bent back.
Restrict space makes the person reach awkwardly.
Problems & solutions

Drilling – poor working posture

Watching the drill floor and answering the phone is not easy.
Problems & solutions

Drilling – poor working posture

Emptying drums is difficult to do staying upright.
So what are the solutions to a poor posture?

Half the story is sorting out the layout and making it possible to get in a good posture.

The other half is to get the person to practice good handling technique.
Look at the layout of the control panel in the drill shack:

See how the operator works - does he have to reach a long way?

Can he work in a better posture, operating the brake, accelerator, etc. and watching the drilling?
Here, the operator has to twist awkwardly to reach the controls and look through the window.
Drilling – access to plant and equipment

As well as reaching the controls, the operator has to be able to see them. Here are a variety of displays:

They are spread out and it’s not easy to see at a glance what the displays are showing.
Drilling – access to plant and equipment

Possible solutions:

- Can a **light** be provided to make the display more visible?
- Could you attach more obvious **labels**?
- Could you attach **markers** to the dial to show levels (either the normal or critical ones)?
Size matters!

The size of the window to the drill floor should be as large as possible.

There should be a clear view of the people and the equipment.
In some cases, windscreen wipers are used to keep the panels clear.

Perspex may get scratched - so replace when necessary.
Make sure that there is a snug fit to your:

- Goggles
- Ear protection
- Gloves, etc.

If not, it will not only offer less protection, but may make your job harder to do:

- e.g. poor grip with unsuitable gloves, poor visibility with ill-fitting goggles
Problems & solutions

Control Room

The main ergonomics issues are:

- Working posture
- Equipment that is difficult to use
- Access to plant
Where equipment is not fixed, look and see if it is well-placed.

Look at these computers. Are they in a good position?

How might the operator sit and work here?...
Problems & solutions

Control Room – poor working posture... badly!

Look at his back, neck and right arm.

Look closely at the wrist.
Control Room – poor working posture

Make sure equipment can be reached easily - either from sitting or standing.

Another example is the intercom:

This is too short and too far away - he has to lean forward to use it.
Control Room – poor working posture

Most of the time this job is done sitting down.

Sitting puts the back under more pressure than standing.

Sitting AND leaning forward increases the risk of back problems.
Problems & solutions

Control Room – poor working posture

It isn’t always the person’s fault that they sit badly.

The chair arms here clash with the console and prevent the person sitting close enough. Look at the damage on the chair arms!
Problems & solutions

Control Room – poor working posture

The chair should be comfortable and supportive - in a range of postures.

Since the person has to lean forward a lot, it would be useful to have a good back support at all times.

Chair arms should be short and height-adjustable.
Control Room – poor working posture

Breaks are important to keep you awake and alert.

The advice is ‘little and often’ -

- Stand up
- Walk around
- Get drinks
- Vary the type of work you are doing

Change your posture regularly - try not to keep bending your back.
**Problems & solutions**

**Control Room – access to plant and equipment**

*Access* to the control panels/consoles is important for control room ops to do their job well.

They must be able to *find* and *respond* to information quickly and easily.
Control Room – difficult to use equipment

It is helpful if the displays and controls are **colour-coded** in a consistent way.

*Alarms* are better if **visual and auditory**. They can be specific to the part of installation - by colour, sound and position.
It’s important **not** to have overload of information, such as:

Large collections of *buttons*, *lights*, etc. that are difficult to scan over.

Groups of equipment such as *telephones* - how can you tell which is ringing?
The main ergonomics issues are:

- Manual handling
- Slips, trips & falls
Problems & solutions

- Helideck – manual handling

The most obvious handling is of bags and equipment.

They are usually picked up off the floor, carried a short distance, and put on the floor again... but could a trolley be used?

This was specially designed - the sides drop down and the larger wheels cope with uneven surfaces.
Problems & solutions

遵守人体工学原则

- **Helideck – manual handling**

  当处理货物时，确保背部直立，不要弯腰，弯曲腿部。

  将物品靠近身体。

  用链状法传递包裹，保持物品远离地面。

  Form a chain, passing bags between you, keeping stuff off the floor.
Problems & solutions

 unidades

Helideck – manual handling

Handling the fuel hose can be heavy work - share it between 2 of you.

See if any pieces of equipment you use could be exchanged for lighter ones or a different refueling system developed.
/problems & solutions

込 Helideck – slips, trips & falls

More and more platforms are removing the knotted rope on the helideck. Many accidents have occurred by crew tripping on it.

When it’s windy, dark and you’re carrying bags, it’s easy to catch a foot.

On a smooth surface, you can use a trolley.
The main ergonomics issues are:

- Poor working posture
- Equipment that is difficult to use
**Problems & solutions**

- **Crane cab – poor working posture**

  Most of your time is spent sat down, often leaning forward

  - How long might you sit for at a time?
  - Ever noticed backache?
  - What could you do about it?
To try and prevent aches and pains from sitting awkwardly for long stretches:

- **Stand up** regularly
- **Stretch** your legs
- See if the **layout** can be improved

**Crane cab – poor working posture**
Problems & solutions

Crane cab – poor working posture

Look at the seat closely ... what can be adjusted?

- Backrest position
- Height
- Lumbar support
- Head rest position

It’s a good idea to make small changes during your shift - to vary your posture slightly.
Problems & solutions

Crane cab – poor working posture

Your head may be in a variety of positions - up or down.

Some cabs have a microphone to communicate with the crew. Can this be used from a relaxed position? If not, can it be extended or relocated?
The main ergonomics issues are:

- Manual handling
- Poor working posture
- Equipment that is difficult to use
- PPE
Scaffolders do a fair amount of manual handling - usually the smaller pieces to/from storage.

Where possible, reduce the quantity carried by hand - especially up/down stairs.
Use a trolley when you're on one level ...

... or a wheelbarrow for smaller pieces.
When carrying planks and poles:

- Don’t overload yourself.
- Carry the load with an upright posture.
When storing items:

- Avoid putting scaffold equipment too high or too low - between knee and shoulder height is OK.
- Watch your back when moving heavier items.
- Keep upright as much as possible.
When out around the plant ...

Try to keep the load close to you and rest heavy planks on something ...

... rather than straining at arm’s length.

_featured image_
Problems & solutions

Scaffolding – poor working posture

As a scaffolder, you may be used to working in some uncomfortable, awkward positions ...
Scaffolding – poor working posture

Remember, the more awkward your posture, and the longer you do it ...

... the greater your risk of injury.
So what can you do? • Try and work in a comfortable, relaxed posture.

• Think about your back, neck, arms, etc. and put the least strain on your joints and muscles.

• Can you lean against something to cut down the muscular effort needed?
The scaffold spanner is difficult to use equipment.

You need to think about how you use the scaffold spanner to reduce your risk of injury:

- Try and work with your *wrist in a straight, relaxed position*, not bent awkwardly.
- Keep your *arms near your body* - the further away they are the faster they’ll tire.
Scaffolding – difficult to use equipment

If you feel strain or discomfort …

• Try to alternate between using your left and right hand.

• Don’t grip the spanner too tight - you could make it easier to grip by wrapping grip tape around the handle.

• The wider the handle, the less effort needed to grip it.
Improving access is part of your job...

...but it doesn’t mean it is easy for you.

One of your main concerns has to be your safety - those lanyards are essential - use them!
Use the PPE required - make sure it’s in good condition, fits you well and does its job.
The main ergonomics issues are:

- Poor working posture
- Equipment that is difficult to use
You may well find yourself working in some pretty awkward postures. It may not be easy to find a comfortable position because of where you are working.
So it's up to you to …

• Think about the **best way** to do the job.

• Move about and **change your position**.

• Take the **strain** off your back, arms, legs, etc.
Paint Spraying – poor working posture

Even doing things like refilling the spray gun - don’t stand there with your back bent over and legs straight.

Either put the paint pot on something higher, or crouch down.
Check your mask fits, and is the right one for the job. Change it regularly.

Wear enough layers to keep warm - your muscles are more likely to be damaged if cold.

Since you may be working in poor postures, you need to do all you can not to suffer sprains, strains etc.
Don’t grip the spray gun nozzle harder than you need to. This will only tire your hand and arm faster - and increase the chance of injury.

Perhaps there is a catch to lock the nozzle in the ‘on’ position - to save your grip?

Keep your wrist in a relaxed, straight position.
Problems & solutions

払い 塗装 - 使用が難しい装備

- 取定期間のポジション休憩をとることで、痛む筋肉をリラックスさせる。
  - 立って、伸ばして、動いてください。

- 自分のペースで作業を行い、スタートからフィナーレまでのフラットアウトではなく、間隔を設けて作業を進めてください。

- 只ち十分なペイントを容器に入れて、管理できる長さの時間に絶対にください。
Problems & solutions

❖ Abseil work

The main ergonomics issues are:

• Manual handling
• Slips, trips & falls
• Poor working posture
Abseil work – manual handling

You have less opportunity to take the strain from your job, but you should try to:

- Use **slings** and **ropes**.
- **Share** the effort between the two of you.
- **Carry only as much as you need** to do the job efficiently.
Problems & solutions

اسلی، تریپ و فایل‌های Abseil

این تنبیه‌ها در ماهیت جو و محیط کار شما را کاهش می‌دهند.

• مطمئن شوید که لباس و ابزار شما به‌خوبی نگهداری و توزیع شده‌اند و بازداشت شده‌اند.

• بدین طور که لباس و ابزار شما باعث بروز آسیب در ماهیت کار شما بیش از این که در محیط کار شما باشند می‌شوند.

• استفاده از دستکش‌های مناسب - آنها باید به‌طور مناسب انتخاب شوند تا باعث بهبود گرفتاری و گرمایش دسته شما شوند.
Problems & solutions

故乡 [Abseil work – slips, trips & falls]

- Do what you can to take the strain off your body.
- Vary the way you work.
- Keep your arms close to your body.
- Stand on something to take the weight off your legs.
- Take regular breaks - walk about, stretch and keep warm.
Wire line deck

The main ergonomics issues are:

- Manual handling
- Poor working posture
- Equipment that is difficult to use
As always, avoid manual handling wherever possible:

- Use a **crane**, hoist, etc.
- **Share** the load with someone else.

Don’t strain yourself.
Wire line deck – manual handling

If you do have to lift something, and it’s manageable for you ...

Don’t do it this way ... ... but more like this.
Problems & solutions

Wire line deck – poor working posture

Think about where tools and equipment are kept, and how often they’re used.

Avoid putting items on the floor ...

... or up high
Wire line deck – poor working posture

Don’t put too many things in a small space.
This is a neat way to store downhole tools - but think about how to get at the ones at the back.

The heaviest items should be the easiest to get at.
Wire line deck – poor working posture

The more upright and relaxed your posture the less your chance of injury.

Keep your work around waist height.
Problems & solutions

- **Wire line deck – difficult to use equipment**

  - Use tools that *take the effort out of your work, where possible.*
  - If you are straining to do a task, look for solutions:
    - *get help*
    - *use different equipment*
  - Look after equipment - *repair / replace / maintain.*
Problems & solutions

Wire line deck – difficult to use equipment
Some operations can be repetitive or lengthy e.g. taking downhole tools apart, due to the length of thread on the screw.

- Work in the best posture you can.
- Let the tools/equipment do the heavy work.
- Take mini-breaks.
- Alternate between using left/right hand.
The main ergonomics issues are:

- Poor working posture
- Equipment that is difficult to use
Not many people sit upright ...

The key is to change your posture frequently - no matter how well you sit, your back is under strain. So get up and move about!

Go on!
The layout of an office workstation has to be right before you look at posture.

You need to look at the:

- desk
- chair
- computer
- keyboard, mouse, etc.
ERGONOMICS OFFSHORE

What is ergonomics?
Accidents offshore
What's in it for me?
How work affects injuries
Hazard spotting
Problems & solutions
- Paint spraying
- Abseil work
- Wire line deck
- Offices
- Galley
- Cabins/laundry
- More ...

Problems & solutions

✦ Offices – difficult to use equipment

Desk

It should be deep enough to be able to put the monitor in front of you.

This one is not deep enough - the computer is to one side.

As a result you have to sit with your back or neck twisted.
If you put the computer too close to you, you may sit too close and get sore eyes... or you may sit further back and not have much desk space.

- The screen should be about arm's length away from you.
- The space you need in front depends on what you do and how you type.
ERGONOMICS OFFSHORE

Problems & solutions

What is ergonomics?
Accidents offshore
What’s in it for me?
How work affects injuries
Hazard spotting
Problems & solutions
- Paint spraying
- Abseil work
- Wire line deck
- Offices
- Galley
- Cabins/laundry
- More ...

- Offices – difficult to use equipment

Chair
- The chair should be comfortable and with adjustable -
  seat height
  backrest height
  backrest angle
- If you have armrests - make sure they don’t prevent you from sitting close enough - if they do: take them off!
The monitor should be:

- In front of you.
- At eye height (top of the screen).
- About arm’s length away.
Problems & solutions

🌟 Offices – difficult to use equipment

Keyboard, mouse, etc.

- This equipment should all be within easy reach. Try and keep your wrists straight and relaxed.
- If you work from paperwork at the same time as using the computer, you may need a document holder.
- If you touch-type - get a document holder at screen height. If you don’t - put the document holder between keyboard and computer.
These are fine for short periods of work, but if you use it most of the time, consider:

- Putting the laptop on a stand or similar so it’s a better height to see.
- Plugging in a separate keyboard and mouse.
The main ergonomics issues are:

- Manual handling
- Slips, trips & falls
- Access to plant and equipment
Problems & solutions

🎁 Galley – manual handling

Provisions may arrive at the galley and need to be stored there.

How does this happen on your installation? Like this?

Provisions may arrive at the galley and need to be stored there.

How does this happen on your installation? Like this?
Galley – manual handling

Here are some suggestions to reduce the manual effort:

- Use a **collapsible conveyor** system to move items from container to stores.
- Make a **slide/chute** to carry items down to a lower level.
Galley – manual handling

- Don’t put the heavy things on the floor! It increases risk of injury. Should this 16kg bag be on the floor?

The diagram here gives you an idea of where items of certain weights should be placed.
Galley – manual handling

This is a fridge for raw meat - there are some large, heavy joints.

- Keep the heavy ones clear of top and bottom shelves, these should be stored around waist height.
Galley – slips, trips & falls

In the galley, the floor may well be wet and slippery. Some solutions to this are:

- Wear good, **non-slip footwear**.
- Use suitable **flooring** - with drainage.
- **Clean** regularly.
- Use **sawdust** to deal with spills and grease.
Galley – slips, trips & falls

Another problem is the risk of tripping, especially when carrying something.

- Look out for steps or lips on doorways, or objects left in the way.
- Can you make steps and lips more conspicuous?
  - Put ramps in.
  - Keep a high standard of housekeeping.
Galley – access to plant and equipment

These containers aren’t heavy, but how often are they used?
Can everyone reach them?

Look around you and see where things are and how easy you or others can reach them.
His back will ache after a while. Does the sink need to be so deep, can an insert be fitted to raise the working height?
Problems & solutions

Galley – access to plant and equipment

This is a good working height.
Note his upright posture.
The ideal height to work at depends on what you are doing -

- If no effort is required - about elbow height is fine.
- If you need to apply force - you need a lower surface (so you can lean over your work).
- If the task is detailed and intricate, you need to work higher up.
Problems & solutions

◆ Cabins / laundry

The main ergonomics issues are:

- Manual handling
- Poor working posture
- Access to plant and equipment
Problems & solutions

❖ Cabins / laundry – manual handling

- To avoid carrying bedding and clothing between cabins and laundry use a trolley.
- Make sure it is suitable for the work area - door lips, etc.
Try and avoid trolleys with a low base - you end up leaning right over to reach inside.
Problems & solutions

apsulation

Cabins / laundry – manual handling

There may be handling issues with the chemicals used in the laundry.

- Heavier items should be stored around waist height.
- To reduce the frequency of handling - is it possible to store on a wheeled container?
What is the best way to cope with the top bunk?

Is it from the ladder?

... or actually on the mattress?
Care of your back is important - try to avoid constant bending.

• Straighten up often to rest your back.
**Problems & solutions**

*Cabins / laundry – access to plant and equipment*

Some cabins have single beds, others have bunkbeds.

Bed-making / changing can be awkward, especially the top bunk.

- It may help to **prop up** the mattress with something when you are cleaning under it.
In the laundry, look at the position of the washers and dryers. The machines should be an easy height to unload...

... and also to operate.
Problems & solutions

- Cabins / laundry – access to plant and equipment

- Make sure there is space to deal with the laundry e.g. folding and organising.
Ergonomics is important offshore to help you to work safely, efficiently and with less chance of injury.

Ergonomics fits the tools, job and workplace to you.
ERGONOMICS
OFFSHORE

You can make a difference in the way you work!

THE END