

ITEM NO :

80.004

P A S M A O N E D A Y T R A I N I N G

(Max 12 persons per course)

Hours: 10 am start to 4 pm finish, with 45 mins for lunch

SWITCH ON - INTRODUCTORY SLIDE 0 NOW ON SCREEN

1. INTRODUCTION

I would like to welcome all delegates to this training course after completion of which you will have a better understanding of prefabricated aluminium scaffold towers, together with their known hazards, limitations and safe working loads; maintenance, storage, inspection for damage and even a basic understanding of the legal aspects. It is universally accepted that all operatives erecting prefabricated aluminium scaffolding must, in the interests of safety be trained and qualified.

There will be a written and practical examinations at the end of the course and if you successfully complete these examinations you will obtain a certificate stating that you attended a training course on the safe erection and use of aluminium towers which covers in conjunction with the relevant supplier's manual, all other PASMA member's scaffolds.

This course is approved by PASMA which stands for PREFABRICATED ALUMINIUM SCAFFOLDING MANUFACTURERS' ASSOCIATION. PASMA is composed of the seven major manufacturers in the UK who have come together to recommend Codes of Practice, Standards etc for the safe use of prefabricated aluminium scaffolds.

It is not possible to anticipate the level of knowledge of all the candidates attending a PASMA training course, therefore the instruction has been pitched to what we consider is likely to be understood by everybody attending. Thus the person with a limited knowledge will be able to follow everything and the person with a greater knowledge will have some useful revision. We use the audio visual aid to ensure uniformity of presentation but, of course, the instructor will answer questions, give practical demonstrations and conduct a final examination.

✓

2. INTRODUCTION TO THE BASIC RANGE OF TOWERS

SLIDE 2

4.3M (14' 1") STAIRSPAN TOWER - FULLY DECKED

COMMENTARY:

Here we have a 4.3M (14' 1") platform height stairspan tower. This type of tower gives the best means of access to the working platform. The platform levels are at approx 2M (6' 6") intervals and the user climbs a stairway and walks along the platform to the base of the next stairway. The top platform can be double boarded, as in this illustration, and the board over the stairway has a hinging facility which permits access to the top platform. Toeboards and guardrails must be fitted to every working platform. In this slide the toeboards have been omitted for clarity.

3. SLIDE 3

6.3M (20' 8") STAIRSPAN TOWER - SINGLE BOARDED AND WITH CURVED OUTRIGGERS

COMMENTARY

Here we have the same type of tower ie. a stairspan tower, but erected to 6.3M (20' 8") platform height. This greater height required the addition of outriggers or stabilizers and you see illustrated the curved mobile outriggers.

The top platform is only single boarded on this occasion and please notice that all platforms are under one another and all stairways are under one another. Again, toeboards and guardrails must be fitted to working platforms.

4. SLIDE 4

4.25M (13' 11") DOUBLE WIDTH SPAN TOWER

COMMENTARY:

Here we see a Double width span tower. The method of access to the working platform is by using the horizontal rungs of the frames which the user climbs vertically and then passes through a trapdoor in one of the platforms. Whilst this method of access is perhaps not as convenient as a stairway, the span tower gives more increments at which a platform may be placed. Also, while stairspan towers are normally only available in 2M lengths, span towers are available in approx 2M (6'), 2.5M (8') and 3M (10'). Again remember that toeboards and guardrails must be fitted to any working platform.

5. SLIDE 5
6.25M (20' 6") DOUBLE WIDTH SPAN TOWERS (WITH STABILIZERS) -
BOARDS AT EVERY FRAME HEIGHT
COMMENTARY:

Here we see another double width span type tower erected to 6.25M (20' 6") platform height. This greater height required the addition of stabilizers or curved mobile outriggers and you see illustrated the telescopic stabilizers. This form of stabilizer is used where the tower is moved infrequently. You will notice the platform boards fitted at approx 2M (6' 6") intervals to make for ease of erection and dismantling.

The Construction Working Places Regulations required that all gangways (and non working platforms can sometimes be considered to be gangways) from which a person is liable to fall more than 2M (6' 6") shall be provided with guardrails and toeboards. Exceptionally, they may be removed to remain unerected for the time and to the extent necessary for the access of persons or the movement of materials or other purposes of the work, but otherwise must be fitted as soon as practicable.

6. SLIDE 6
2.25M (7' 5") SINGLE WIDTH SPAN TOWER
COMMENTARY

Here we see a single width span type tower (ie. approx 762mm (2' 6") wide erected to 2.25M (7' 5") platform height and like the double width span type tower the user's method of access to the working platform is by climbing the rungs vertically and then passing through the hatch in the platform. Again, like the double width span type towers, these towers are available in approx 2M (6'), 2.5M (8') and 3M (10') platform lengths. If this single width tower needed to be increased in height by the addition of more frames, then mobile outriggers or stabilizers would have to be fitted before the addition of the next lift.

7. SLIDE 7
6.25M (20' 6") SINGLE WIDTH SPAN TOWERS - COMPLETE WITH
STABILIZERS AND BOARD AT EACH FRAME HEIGHT
COMMENTARY:

Now we see the single width span type tower erected to 6.25M (10' 6") platform height and fitted with telescopic stabilizers. Again, platforms have been fitted at approx 2M (6' 6") intervals to make for ease of erection and dismantling. You can see all the platforms have trapdoors so that the user climbs within the scaffold tower. Remember that all working platforms must be fitted with Toeboards and Guardrails.

NOW THAT YOU HAVE BEEN INTRODUCED TO AND CAN RECOGNISE THE DIFFERENT TYPES OF TOWERS, LET US FAMILIARISE OURSELVES WITH THE INDIVIDUAL COMPONENT PARTS AND START BY IDENTIFYING THEM.

8. SLIDE 8
COMPONENT PARTS FOR A STAIRSPAN TOWER
COMMENTARY:

Here we see the various component parts which go to make up a PASMA type Stairspan scaffold tower (Pause for 10 seconds viewing).

9. SLIDE 9
125mm 5" LOCKING CASTOR
COMMENTARY:

Here we see the choice of castors available. You will notice that the brake is applied by pressing down on the brake lever. The 8" and 6" Castor are of different design to the 5" where the brake lever is pressed down the castor wheel moves to a non-trail position. The 5" is always in the trail position.

10. SLIDE 10
BASE PLATE
COMMENTARY:

Here we have a base plate which is used as an alternative to the castor where mobility is not required. It too has a spigot with a spring-loaded ring to retain the base plate in the adjustable leg. You will notice that there is a swivelling facility which allows the base plate to accommodate small slopes of the foundation surface.

11. SLIDE 11
ADJUSTABLE LEG
COMMENTARY:

Here we see the adjustable leg into which fits either the castor or baseplate; the leg shank is retained in the base of the frame in a way which is shown in the next slide. Adjustment of the leg is available by pressing the trigger that is fitted in the leg housing which is hooded to prevent accidental release. This gives very rapid adjustment but when the finer adjustment is required the leg housing assembly may be rotated to give an infinite degree of adjustment. On tall towers it may be necessary to reduce the pressure on the leg housing by rotating the leg housing to release the trigger mechanisms for rapid adjustment.

12. SLIDE 12
ADJUSTABLE LEG BEING FITTED INTO FRAME
COMMENTARY:

Here we see the adjustable leg being fitted into the base of a frame. When pushed home the spring loaded pin mechanism will prevent the adjustable leg falling out.

13. SLIDE 13
FRAME (2M STAIRSPAN)
COMMENTARY:

Here we see a 2M Stairspan frame. You will notice that there are two collars at the base of the frame. These will accept the adjustable legs (as in the last illustration) or the spigots at the top of another frame. You will notice that on the rungs there are locating pins. These rungs normally accept the Bannister Brace, Platforms and Ladders.

14. SLIDE 14
GUARDRAIL (HORIZONTAL) BRACE - INSET HOOK MECHANISM
COMMENTARY:

Here we see a typical brace. A Guardrail or Horizontal brace can always be easily identified as its length is the same length as a platform and is colour coded. You will notice the locking mechanism in each hook is the automatic type whereby no priming is necessary.

15. SLIDE 15
DIAGONAL (BANISTER) BRACE
COMMENTARY:

Here we see the range of standard braces. They are all colour coded for ease of identification.

16. SLIDE 16
STANDARD PLATFORM
COMMENTARY:

Here we see a standard platform. There is normally no locking mechanism in the hooks and the plywood decking is permanently fixed to the frame of the platform.

17. SLIDE 17
TRAPDOOR PLATFORM
COMMENTARY

Here we see a trapdoor platform. Again there is normally no locking mechanism in the hooks, but with Stairspan the complete plywood decking is hinged on one side to allow the operator to pass through the frame of the platform. The trapdoor is fitted with a latch to secure the trapdoor in position.

18. SLIDE 18
STAIRWAY
COMMENTARY

Here we see the stairway. The four hooks that are fitted to the end of the stairway have locking mechanisms.

19. SLIDE 19
STAIRSPAN GUARDRAIL FRAME
COMMENTARY

Here we see a stairspan guardrail frame. Please note that there are no spigots fitted so it can only be used at the top of the tower.

20. SLIDE 20
CURVED OUTRIGGER
COMMENTARY

Here we see a curved outrigger. One outrigger is offered onto each of the four corners of a tower using two locking hooks. You will recall that these outriggers are added to increase stability and they are locked into their correct position using a brace which is the same as the diagonal banister brace. Notice that the outrigger will retain an adjustable leg with it's castor or base plate in the same way that a frame does. This type of outrigger is recommended for towers that are going to be moved frequently.

21. SLIDE 21
TELESCOPIC STABILIZERS
COMMENTARY

Here we see a telescopic stabilizer. One telescopic stabilizer is fitted to each of the four corners of the tower using the captive couplers. This stabilizer has a telescopic inner leg which is retained in a fixed position with a locking pin. Again, you will recall that these stabilizers are added to increase stability. With this type of stabilizer it is not necessary to use a brace to lock it into position because the captive couplers clamp the stabilizer firmly on to the vertical tubes and this stabilizer is used only when a tower is likely to be moved infrequently. There is no provision for fitting an adjustable leg with its castor or base plate.

22. SLIDE 22

TEMPORARY FINISH OF THE AUDIO VISUAL PRESENTATION
WILL THE INSTRUCTOR PLEASE SWITCH OFF THE MACHINE

DELEGATES ADJOURN WITH INSTRUCTOR TO DEMONSTRATION AREA

All the components previously described in the audio visual presentation are set out and the delegates are asked to identify them. Hand out stairspan instruction manual. A practical demonstration is then given by the instructor erecting a stairspan tower to a 4.3M platform height with guardrail and toeboard also fitted with the curved outrigger and stabilizer; the delegates being advised that whilst outriggers or stabilizers are unnecessary these are fitted to this tower just to illustrate their method of attachment.

QUESTIONS

Instructor then dismantles the tower and delegates re-erect and dismantle under his supervision.

QUESTIONS

COFFEE BREAK - 10 MINUTES

DELEGATES RETURN TO LECTURE ROOM

Audio visual continues with introduction to the basic range of towers.

SWITCH ON MACHINE (SLIDE 0)

23. SLIDE 23
COMPONENT PARTS FOR A DOUBLE WIDTH SPAN TOWER THAT ARE COMMON TO A STAIRSPAN TOWER ie. CASTORS, BASE PLATE, ADJUSTABLE LEG, STANDARD PLATFORM, GUARDRAIL (HORIZONTAL) BRACE, DOUBLE AND SINGLE TOEBOARDS AND ALL TYPES OF OUTRIGGERS AND STABILIZERS
COMMENTARY

Here we see all the component parts for a double width span tower that are not common to the stairspan tower that you are now familiar with. Hence we need not go into further detail with these components, but we continue with those components that are peculiar to a double width span tower.

24. SLIDE 24
DOUBLE WIDTH SPAN FRAME
COMMENTARY

Here we see a four rung double width span frame as used in the span type tower. The adjustable leg will fit into the frame collars in the same way as they did in a stairspan frame. In addition to the four rung frame there is also a five rung frame and a three rung frame. You will remember that the advantage of this closer positioning of rungs is that:

- a. The user may use the rungs to gain access to the platform; and
- b. There are more increments at which a platform may be placed.

25. SLIDE 25
1M DOUBLE WIDTH SPAN FRAME COMPLETE WITH SPIGOTS
COMMENTARY

Here we have the five rung double width span frame which is essentially the same as four rung span frame, except that it is one rung higher.

26. SLIDE 26
DIAGONAL BRACE FOR A 2M SPAN FRAME COMPLETE WITH SPIGOTS
COMMENTARY

Here we see the diagonal brace for a 2M span length tower. This brace is shorter than the diagonal brace in the stairspan tower, although it spans the same distance between frames. It therefore produces a shallower X configuration. You will recall that there are two other platform lengths ie. 2.5M (8'), and 3M (10') in the span range of towers. Whilst the construction of these towers will entail the use of different lengths of horizontal brace, diagonal brace, platform and toeboard, all other components are common with the 2M (6') span tower and the construction pattern is identical.

27. SLIDE 27
SPAN TRAPDOOR PLATFORM
COMMENTARY

Here we see a trapdoor platform. Whilst the overall dimensions of this platform are identical with the standard platform on the stairspan or full length trapdoor platform on the stairspan, the trapdoor in this case is only approx 610 mm (2') by 610 mm (2') as this is more convenient when climbing vertically using the frame rungs, or when climbing an inclined ladder.

28. SLIDE 28
TWO RUNG FRAME
COMMENTARY

The design and construction of Zig Zag span frames do not, I repeat do not, require a separate guardrail frame as when the platform is positioned on the third rung down from the top of a standard frame the correct guardrail heights are achieved. However, for special applications the two rung frame seen here may be used.

29. SLIDES 29, 30, 31 AND 32
COMPONENT PARTS FOR A SINGLE WIDTH SPAN TOWER THAT ARE NOT COMMON TO A DOUBLE WIDTH SPAN TOWER ie. FRAMES 2M, 1M AND GUARDRAIL FRAME
COMMENTARY:

Here we see the five, four and three rung single width span frame, and the two rung single width guard rail frame. These are the only components that are not common to the double width span tower with which you are now familiar. As with the double width span tower there are three different span lengths.

33. SLIDE 33
CLIP-ON LADDER FOR SPAN TOWERS
COMMENTARY:

Here we see the clip-on ladder for a span type tower. There are two locking hooks that are fitted to the top end of the clip-on stairway and a locking hook fitted to the two stand-off arms. These hooks locate on to the rungs of a frame. This type of clip-on ladder is used as an alternative method of climbing span frames. The nine, seven and five rung ladder occupy a five, four and three rung span frame respectively.

34. SLIDE 34

FINISH OF AUDIO VISUAL PRESENTATION OF INTRODUCTION TO BASIC RANGE OF TOWERS.

PLEASE SWITCH OFF THE MACHINE.

DELEGATES TO REASSEMBLE IN DEMONSTRATION AREA WITH INSTRUCTOR

All the span type components described in the audio visual presentation are set out and the delegates are asked to identify them. Hand out span instruction manuals. A practical demonstration is then given by the instructor erecting both a double width and single width span tower - double to a 4.25M platform height and single to 2.25M platform height.

QUESTIONS

Instructor then dismantles towers and delegates re-erect and dismantle under his supervision.

QUESTIONS

LUNCH BREAK - 45 MINUTES

AFTER LUNCH - AFTERNOON LECTURE

SWITCH ON MACHINE

INTRODUCTORY SLIDE 0 NOW ON SCREEN
INTRODUCTORY TALK
COMMENTARY:

Now that we are familiar with the basic range of towers, their respective components and the erection and dismantling of these towers, we will now concern ourselves with that most important consideration - the safe use of towers and their day to day application.

The PASMA Code of Practice, of which you will all be given a copy at the end of the course, fully covers the subject of the safe use of the tower.

35. SLIDE 35
FIG 2 IN THE CODE OF PRACTICE (PAGE 7)
COMMENTARY:

An unstable tower is potentially a dangerous tower and stability is directly related to the effective base dimension of the tower.

The effective base dimension of a tower (other than when sited against a wall) is the shortest side of the rectangle formed by either the base of the tower or, where fitted, the outriggers or stabilizers.

36. SLIDE 36
FIG 3 IN CODE OF PRACTICE (PAGE 7) - PAUSE FOR 5 SECONDS

37. SLIDE 37
FIG 4 IN CODE OF PRACTICE (PAGE 7) - PAUSE FOR 5 SECONDS
COMMENTARY

This measurement can be multiplied by three to discover the maximum platform height at which a static tower can free stand outside or three and a half times when used inside. The same rule applies for a mobile tower with outriggers. But if a tower with stabilizers is moved, then the formula is reduced to two and a half times to one either inside or outside, in which case the stabilizers must be adjusted to clear the ground by not more than 12 mm (1/2"). Retighten the couplers before moving and reposition with the pads on the ground as soon as the new position is reached. Therefore avoid moving with the stabilizers in the position shown in this cartoon.

38. SLIDE 38
CARTOON 11 - PAUSE 10 SECONDS

39. SLIDE 39
FIG 5 IN CODE OF PRACTICE (PAGE 8)
COMMENTARY:

When used against a building or wall, the effective base dimension is measured in a different way, as shown in this slide. As this concept may be a little difficult to remember you can always imagine the normal position that the outriggers or stabilizers would be in if it were not for the wall - as shown in this slide.

40. SLIDE 40
SKETCH SHOWING POSITION OF OUTRIGGERS AGAINST WALL
COMMENTARY:

Then the effective base dimension can be calculated from this notional position. Pause for 5 seconds.

41. SLIDE 41
FRONT OF PASMA CODE OF PRACTICE
COMMENTARY:

These very important features determining stability are fully covered in the PASMA Code of Practice.

In fact, the illustrations shown on the preceding four slides come from the PASMA Code of Practice. You should read the Code of Practice carefully as soon as possible after this course, but, in the meantime, much of the Code of Practice is summarised in the 'Lists of Hazards', 'Before Erection', 'Before Use' and 'During Use' check lists as shown in the Code of Practice.

42. SLIDE 42
LISTS OF HAZARDS (PASMA CODE OF PRACTICE LIST) (PAGE 15)
COMMENTARY:

We now know the formula used to calculate the maximum platform height relative to the effective base dimension so we can avoid the first hazard of height being too great relative to the effective base dimension. We also know that we must use outriggers or stabilizers to increase the effective base dimension if the true base dimension of the tower is inadequate. We should therefore avoid the second hazard of failure to use the outriggers or stabilizers where required.

43. SLIDE 43
(CARTOON 16) - PAUSE 10 SECONDS
COMMENTARY:

We have discussed the importance of the effective base dimension. The other major factor affecting stability is vertical alignment and obviously a tower used or moved on sloping or obstructed surface must have its vertical alignment maintained. Avoid using the tower as in this cartoon. It also follows that a tower used on a level surface must have its vertical alignment maintained.

44. SLIDE 44
(CARTOON 24) - PAUSE 10 SECONDS
COMMENTARY

Always work on the 'belt and braces' principle, although a tower may be capable of free standing, tie it in at all times whenever possible, to some adjacent secure structure.

45. SLIDE 45
(CARTOON 13) - PAUSE 10 SECONDS
COMMENTARY

When moving a tower, always apply effort at the base of the tower - never pulling at the platform level - as in this cartoon.

46. SLIDE 46
(CARTOON 9) - PAUSE 10 SECONDS
COMMENTARY

Take care to see that the tower does not foul any overhead obstructions, particularly overhead electrical cables, as in this cartoon.

47. SLIDE 47
(CARTOON 23) - PAUSE 10 SECONDS
COMMENTARY

Always ensure that the ground is clear of obstructions, pot-holes, ducts etc. Always follow the supplier's instruction manual to the letter, not only with regard to what to fit where, but WHEN. The sequence of the operation is as important as the operation itself.

48. SLIDE 48
(CARTOON 2) - PAUSE 10 SECONDS
COMMENTARY:

Avoid building towers like the one in this cartoon. Leave the levitation to the magicians!

49. SLIDE 49
LIST OF HAZARDS (PASMA CODE OF PRACTICE PAGE 15)
COMMENTARY

You will remember from this morning that guardrails and toeboards must always be fitted to platforms. The Construction Working Places Regulations require that all gangways (and non working platforms can sometimes be considered to be gangways) from which a person is liable to fall more than 2M (6' 6") shall be provided with guardrails and toeboards. Exceptionally they may be removed or remain unerected for the time and to the extent necessary for the access of persons or the movement of materials or other purpose of the works, but otherwise must be fitted as soon as practicable.

Always remember, a tower that can be safely used in normal weather conditions can become unsafe in adverse weather conditions. A tower should only be used in normal conditions up to Scale 4 on the Beaufort scale (17 mph). This condition is identified by the wind causing the leaves to rustle. Remember that open ended buildings such as railway sheds, hangers etc. give no protection from the wind. In fact, in some circumstances, it exaggerates it. In these circumstances, use the formula for outside use. Also, sometimes the effective strength of the wind is increased due to the funnelling caused by the relative position of buildings. Avoid the situation as shown in this cartoon.

50. SLIDE 50
(CARTOON 8) - PAUSE 10 SECONDS

51. SLIDE 51
(CARTOON 3)
COMMENTARY

Always remember to unlock the castors before moving the tower and immediately lock them when reaching a new position. Then adjusting the legs to ensure vertical alignment.

Avoid the situation shown in this cartoon. Pause for 10 seconds.

52. SLIDE 52
(CARTOON 12) - PAUSE 10 SECONDS
COMMENTARY:

Avoid the situation shown in this cartoon. Always be mindful

of the Safe Working Load of each platform and tower. This will be shown by the supplier on the label affixed to the platform. Remember that the castors have to bear the total weight of all the loads actually applied to the tower components, plus the self weight of the tower. Again, the Safe Working Load will be shown on the castor.

53. SLIDE 53
CODE OF PRACTICE LIST OF INSPECTION BEFORE ERECTION OF THE TOWER (PAGE 16)
COMMENTARY

Before using a tower, check that all the components necessary to build that particular height of tower (as indicated in the supplier's manual) are on site. Also check all components to see that they are in good condition and compatible.

The Code of Practice lists some of the major components and points out what one should look for. But the supplier will normally issue a check list which is appropriate to his particular product.

54. SLIDE 54
CODE OF PRACTICE LISTS OF CHECKS BEFORE USE OF TOWER (PAGE 16)
COMMENTARY

Always check that the tower is square. Then check that it is vertically aligned. It will then be easy to check that the horizontal braces and platforms are level.

55. SLIDE 55
(CARTOON 17) - PAUSE 10 SECONDS
COMMENTARY

Avoid towers as shown in this cartoon.

56. SLIDE 56
CODE OF PRACTICE LIST OF CHECKS BEFORE USE OF TOWER (PAGE 16)
COMMENTARY

Check that outriggers or stabilizers are correctly positioned and secured and braces are correctly fitted to the outriggers.

Check that all baseplates or castor wheels are fully in contact with the ground, including those on stabilizers or outriggers. All castors should be properly locked.

57. SLIDE 57
(CARTOON 18) - PAUSE FOR 10 SECONDS

Leave the indian rope trick and snake charming to the professionals.

58. SLIDE 58
CODE OF PRACTICE LIST OF CHECKS BEFORE USE OF TOWER (PAGE 16)
COMMENTARY:

Check that all the spigots and socket interlocking clips holding the frames together are secured.

59. SLIDE 59
CODE OF PRACTICE LIST OF CHECKS BEFORE USE OF TOWER (PAGE 17)
COMMENTARY

Check that all bracing members have been located exactly in accordance with the instructions in the supplier's manual; avoid the situation as shown in this cartoon:

60. SLIDE 60
(CARTOON 7) - PAUSE FOR 10 SECONDS

61. SLIDE 61
CODE OF PRACTICE LIST OF CHECKS BEFORE USE OF TOWER (PAGE 17)
COMMENTARY

Check that all guardrails and toeboards are in position as required. Check that all access stairways and ladders are in position and are firmly located.

62. SLIDE 62
CODE OF PRACTICE LIST OF CHECKS DURING USE OF TOWER (PAGE 17)
COMMENTARY

Regular inspection of the tower should be undertaken by a competent person and a permanent written record made of the inspection. Look for unsafe modification or alternations to the construction or damage to the components. If either condition is discovered, it must be rectified before the tower is used again.

63. SLIDE 63
CODE OF PRACTICE CARE AND MAINTENANCE (PAGE 18)
COMMENTARY

Those responsible for the care and maintenance of aluminium alloy towers should regularly attend to the inspection points outlined in the previous section. Additionally, rigorous inspection should be periodically given to all joints and tower components and all rivets and locking devices. Any defects should be made good before the component is further used. Very few parts in aluminium alloy towers need lubrication but if the supplier recommends it, then the mechanism for locking hooks, adjustable legs and castors should be periodically lubricated with a lubricant which is suitable for the purpose.

64. SLIDE 64
CODE OF PRACTICE WARNING (PAGE 18)
COMMENTARY

WARNING - Repairs should only be carried out by the suppliers or other competent person as the tower or tower components may be made hazardous when repaired by an unauthorised person(s). Platforms should not be painted or treated subsequent to manufacture in a way which may conceal defects. Any instruction signs should be checked and replaced as necessary.

65. SLIDE 65
(CARTOON) - PAUSE FOR 5 SECONDS
COMMENTARY

This cartoon shows, in exaggerated form, the unauthorised and makeshift repair by a typical Joe Bloggs.

66. SLIDE 66
CODE OF PRACTICE HANDLING, TRANSPORT AND STORAGE (PAGE 18)
COMMENTARY:

The life of aluminium alloy towers will be increased if proper care is taken of it during handling, transportation and storage. Before storage, materials should be cleaned. Any concrete or corrosive substance should be removed. Proper stacking will reduce damage and will make identification of components easier for reissue.

67. SLIDE 67
CODE OF PRACTICE HANDLING, TRANSPORT AND STORAGE (PAGE 18)
COMMENTARY

Similarly, during transportation, equipment should be properly stacked on vehicles. Space can be saved by transporting systematically allowing braces, platforms, stairways etc., to be stacked within available space in frames.

68. SLIDE 68
SLIDE SHOWING EQUIPMENT NEATLY STACKED ON VEHICLE -
PAUSE FOR 5 SECONDS

69. SLIDE 69
CODE OF PRACTICE NO 12 - TRAINING (PAGE 22)
COMMENTARY

Aluminium alloy towers are designed to be erected and dismantled by operatives having only minimal skill and experience. Provided that the erector can interpret the simple instructions in the supplier's manual and can check the structure when it is finished, then no problems should be encountered in erecting basic towers. However, PASMA recognise that certain users or their employers may wish for more specific training in the use of this type of equipment. That is why PASMA sponsors a training course, operated through its member companies whereby the would-be erector can learn all the essential points and safety features necessary to ensure the safe erection of aluminium alloy towers and is why you are here today.

70. SLIDE 70
SLIDE SHOWING PASMA CERTIFICATE
COMMENTARY

A tower may only be erected and used by a competent person. A PASMA certificate is issued only to those attending this course. Here we see a PASMA certificate which could have your name on it.

71. SLIDE 71
CODE OF PRACTICE NO 10 - NOTES ON REGULATIONS AND STANDARDS
(PAGE 19)
COMMENTARY

Aluminium alloy towers must conform to the Statutory Requirements of the Construction (Working Places) Regulations 1966 where they relate to scaffolds. The principle points in the regulations relate to the provision of guardrails and toeboards, the width of working platforms and methods of access by ladder. Tower designs supplied by PASMA member companies conform to these requirements provided the components are used and fitted in accordance with the instructions. Where independent ladders are used for access, it is the responsibility of the user to see that the relevant statutory regulations are satisfied. Recommendations for the design and performance of aluminium alloy towers are contained in certain sections of British Standard 1139 - Metal Scaffolding. Towers supplied by PASMA member companies will conform fully with these requirements and will normally be supplied with British Standard Kite Mark Approval.

72. SLIDE 72
SLIDE SHOWING CONSTRUCTION (WORKING PLACES) REGULATIONS 1966
AND BRITISH STANDARD 1139 - METAL SCAFFOLDING -
PAUSE FOR 5 SECONDS

73. SLIDE 73
CODE OF PRACTICE NO 11 SAFETY CHECK LIST - BEFORE ERECTING
THE TOWER (PAGE 20)
COMMENTARY

Make sure the supplier's instruction manual is on site and has been read and understood.

74. SLIDE 74
SLIDE SHOWING INSTRUCTION MANUALS FANNED OUT -
PAUSE FOR 5 SECONDS
COMMENTARY

Make sure that all the local bye-laws and police regulations are adhered to when towers are erected in public places.

75. SLIDE 75
SLIDE SHOWING BYE-LAWS AND POLICE REGULATIONS -
PAUSE FOR 5 SECONDS
COMMENTARY

Ensure reasonable precautions are taken to prevent collision with the tower by persons and vehicles.

76. SLIDE 76
CARTOON 4 - PAUSE FOR 5 SECONDS

77. SLIDE 77
CARTOON 20 - PAUSE FOR 10 SECONDS
COMMENTARY

Check that all components are of the same make and correct type, and the correct numbers are on site.

78. SLIDE 78
SLIDE SHOWING IDENTIFICATION LABELS ON BRACES
COMMENTARY

Here we see identifying colour coding of braces.

79. SLIDE 79
SLIDE SHOWING DAMAGED COMPONENTS
COMMENTARY

Check that the components are not damaged. Some damage may not be as noticeable as that shown.

80. SLIDE 80
SLIDE SHOWING ZIG ZAG CHECK LIST
COMMENTARY

Here we see a check list for Zig Zag equipment. Visual and physical checks are listed and should be followed prior to the equipment being used. Check that components with moving parts - castors, brakes, telescopic legs and hooks - are working properly.

81. SLIDE 81
CARTOON 23 - PAUSE FOR 5 SECONDS
COMMENTARY

Check that the floor or surface is firm and free from obstructions.

82. SLIDE 82
CODE OF PRACTICE NO 11 SAFETY CHECK LIST BEFORE ERECTING
THE TOWER (PAGE 20)
COMMENTARY

Check that floor openings are covered or filled in, or protected with barriers.

83. SLIDE 83
CODE OF PRACTICE NO 11 SAFETY CHECK LIST WHEN ERECTING
THE TOWER (PAGE 20)
COMMENTARY

Check that the scaffold can be tied to adjacent structures if necessary.

84. SLIDE 84
CODE OF PRACTICE NO 11 SAFETY CHECK LIST WHEN ERECTING
THE TOWER (PAGE 20)
COMMENTARY

Keep to the instructions in the supplier's manual.

85. SLIDE 85
CARTOON 2 - PAUSE FOR 5 SECONDS

86. SLIDE 86
CARTOON 20 - PAUSE FOR 5 SECONDS

87. SLIDE 87
CARTOON 11 - PAUSE FOR 5 SECONDS
COMMENTARY

Keep to the recommended height to base ratios. Fit outriggers (and outrigger braces to triangulate them) or stabilizers where required, and fit them after erecting the frames at the base.

88. SLIDE 88
CARTOON 3 - PAUSE FOR 5 SECONDS
COMMENTARY

Check that the castor brakes are on.

89. SLIDE 89
CARTOON 16 - PAUSE FOR 5 SECONDS
COMMENTARY

Check that the tower is vertical

90. SLIDE 90
CODE OF PRACTICE NO 11 SAFETY CHECK LIST WHEN ERECTING
THE TOWER (PAGE 20)
COMMENTARY

Check adjustable legs are secure.

91. SLIDE 91
CARTOON 7 - PAUSE FOR 5 SECONDS
COMMENTARY

Fit bracing as the erection proceeds.

92. SLIDE 92
6.3M STAIRSPAN TOWER WITH GUARD RAILS AND TOEBOARDS ON ALL
PLATFORM LEVELS WITH MEN WORKING ON THEM
COMMENTARY

Fit guardrails and toeboards to all working platforms. This tower does not have toeboards fitted for clarity.

93. SLIDE 93
SLIDE SHOWING SAFE WORKING LOAD LABEL ON THE PLATFORM
COMMENTARY
- Ensure that there is a notice on the tower showing the allowable Safe Working Loads.
94. SLIDE 94
CARTOON 12 - PAUSE FOR 5 SECONDS
COMMENTARY
- Ensure that the safe working load of the tower is not exceeded.
95. SLIDE 95
CODE OF PRACTICE NO 11 SAFETY CHECK LIST DURING USE OF THE TOWER (PAGE 20 AND 21)
COMMENTARY
- Here we see the Code of Practice Safety Check List. The sub heading is 'During the Use of the Tower'.
96. SLIDE 96
CARTOON 11 - PAUSE FOR 5 SECONDS
COMMENTARY
- Inspect before each use to see that the height to base ratio is within limits . . .
97. SLIDE 97
CARTOON 7 - PAUSE FOR 5 SECONDS
COMMENTARY
- . . . and that no parts have been removed or altered from the correct configuration . . .
98. SLIDE 98
CARTOON 17 - NO PAUSE
COMMENTARY
- As in this cartoon - PAUSE FOR 5 SECONDS

99. SLIDE 99
CARTOON 17 - NO PAUSE
COMMENTARY
- Ensure outriggers and stabilizers are correctly positioned and secured.
100. SLIDE 100
CARTOON 16 - PAUSE FOR 5 SECONDS
COMMENTARY
- Check that the tower is vertical and the adjustable legs are secure.
01. SLIDE 101
CARTOON 23 - PAUSE FOR 5 SECONDS
COMMENTARY
- Check that the floor or surface is firm and level.
102. SLIDE 102
SLIDE SHOWING DAMAGED PARTS
COMMENTARY
- Check that the tower has no damaged parts in it.
103. SLIDE 103
CARTOON 13 - PAUSE FOR 5 SECONDS
COMMENTARY
- Limit horizontal forces on the platform as much as possible as they must not exceed 20 kgf, 44 lbf.
04. SLIDE 104
CARTOON 19 - PAUSE 10 SECONDS
COMMENTARY
- In industrial areas, housing estates, public places etc., take all necessary precautions, such as fencing the base of the tower to prevent children or vandals from climbing the tower.

105. SLIDE 105
CARTOON 14 - PAUSE FOR 10 SECONDS
COMMENTARY

Ensure that men and materials are off the tower when moving the tower. Never move the tower with a fork lift truck

106. SLIDE 106
CARTOON 13 - PAUSE FOR 5 SECONDS
COMMENTARY

Move the tower by applying an effort at or near the base. Do not move by pulling at the working platform level.

07. SLIDE 107
CARTOON 1 - PAUSE FOR 10 SECONDS
COMMENTARY

Avoid moving the tower by mechanical means, such as towing with a vehicle.

108. SLIDE 108
CARTOON 8 - PAUSE FOR 5 SECONDS
COMMENTARY

Avoid using the tower in windy or severe weather conditions. PASMA scaffolds are safe to be used in winds up to Beaufort Scale 4 (17.2 miles per hour). Further, the PASMA Code of Practice cautions against the use of sheeted towers as this accentuates the hazard of high wind conditions.

109. SLIDE 109
INTRODUCTORY PASMA ONE DAY TRAINING COURSE
COMMENTARY

We will finalise this part of the PASMA one day training course with points found elsewhere in the PASMA Code of Practice.

110. SLIDE 110
CARTOON 10 - PAUSE FOR 10 SECONDS
COMMENTARY

Adjustable legs must not be used for gaining additional height. They should only be used for levelling the base of the tower on uneven or stepped surfaces as shown in the next slide.

111. SLIDE 111
SLIDE SHOWING TOWER ERECTED ON STEPS - PAUSE FOR 10 SECONDS
COMMENTARY

Here we see a tower with the use of adjustable legs achieving a level platform on a step situation.

112. SLIDE 112
SLIDE SHOWING BASE UNIT OF STAIRSPAN TOWER
COMMENTARY

When commencing the erection of a tower and before fitting any diagonal braces, stairways or platforms to the two frames at the base, two horizontal braces must be fitted to the vertical tubes of the frames just above the frame collars. These horizontal braces are always the first two ON and the last two OFF.

113. SLIDE 113
SLIDE SHOWING THE SMALL HATCH PLATFORM CORRECTLY POSITIONED AND ORIENTATED WHEN FULLY DECKED. TOEBOARDS FITTED.
COMMENTARY

When fitting any Trapdoor Platform, always ensure that the hinge of the Trapdoor is correctly orientated. That is, the hinge of the Trapdoor is always against the outside of the tower.


114. SLIDE 114
SLIDE SHOWING CODE OF PRACTICE NO 4 -
PAGE 5 - SCAFFOLD COUPLERS
COMMENTARY

Most PASMA towers have tubes of larger diameter than standard scaffold tube and therefore standard steel or aluminium scaffold couplers are not suitable for coupling for PASMA towers. On occasions, steel or aluminium scaffold tubes are connected to tower structures for various reasons, possibly to provide a stabilising tie. In this case, the user should ensure that the coupler used is suitable for the purpose.

115. SLIDE 115
SLIDE SHOWING CODE OF PRACTICE NO 4 - PAGE 6 - REST PLATFORM
COMMENTARY

Where the vertical distance between intermediate and working platforms exceed 9.14M (30 ft), then it is necessary to provide a rest platform with guardrails.

116. SLIDE 116
SLIDE SHOWING CODE OF PRACTICE NO 4 -
PAGE 6 - INDEPENDENT LADDERS
COMMENTARY

On certain occasions it may be considered necessary to use a separate standard ladder for internal access but this practice is to be avoided if at all possible. 

117. SLIDE 117
CARTOON 22 - PAUSE FOR 10 SECONDS
COMMENTARY

Never use a ladder externally and when used internally always ensure that the ladder does not rest on the ground.

118. SLIDE 118
CARTOON 15 - PAUSE FOR 10 SECONDS
COMMENTARY

If possible, hoist any loads inside the tower or at least inside the effective base area. Avoid lifting loads outside this area.

119. SLIDE 119
CARTOON 5 - PAUSE FOR 10 SECONDS
COMMENTARY

Towers can be built with cantilever platforms to clear obstructions. Such towers have to be carefully erected in accordance with the design approved by the supplier.

120. SLIDE 120
CARTOON 21 - PAUSE FOR 10 SECONDS
COMMETARY

We are going to close on that which possibly may be the greatest temptation of all when using towers. Never, under any circumstances, use steps, ladders, boxes etc., to gain extra height. Use additional tower equipment.

121. SLIDE 121
PAUSE FOR 5 SECONDS

THIS IS THE FINISH OF THE AUDIO VISUAL PRESENTATION
WILL THE INSTRUCTOR PLEASE SWITCH OFF THE MACHINE

QUESTIONS?