

THEATRE SAFETY COMMITTEE

GUIDELINES FOR THE USE OF RAKES IN THEATRICAL PRODUCTIONS

INTRODUCTION

A raked stage may be simple or contain multiple rakes and the surfaces come in many different forms.

A combination of different factors can lead to problems.

Costumes, footwear, the surface and the steepness of the rake, the choreography or fight sequences, and the time spent on the rake can all be contributory factors that can lead to discomfort or injury. It is important to appreciate that not only moving but also standing still on a rake can cause problems.

Everyone involved - Manager, Designer, Choreographer, Director and Performer - has a duty of care to minimise and contain the risk involved.

Whenever a rake is to be used a formal assessment of the risks associated with its use must be undertaken. The risk assessment should be carried out at every stage of production - from design, design of costumes, rehearsals, including technical rehearsals and dress rehearsals, and postproduction. When assessing the amount of time a performer is required to work on a rake, the entire working week must be taken into account, rehearsal time as well as performance time. It should be remembered that an individual may be working for more than one employer during the week and might therefore be working on more than one rake. Also relevant could be the anticipated duration of the performers' requirement to perform on the rake - what might be acceptable for a limited short run might be viewed differently for an extended run in the West End.

Thought should be given as to whether a particular rehearsal needs to take place on the rake and a balance struck between minimising the time spent on the rake whilst providing sufficient familiarisation with the problems of working on the particular rake.

It is accepted that rakes form a major part of set design and it is not the intention of this Code to prevent rakes being used when they are essential to the design concept of a production. These guidelines are to help minimise the potential for the rakes themselves to cause harm.

DESIGNATING A RAKE

Simplistically, a rake is any stage performance surface that is not level. It covers both the very slight and the very steep. It is generally accepted that a rake of 1:21 or flatter is equivalent to a flat surface and that a rake of 1:12 or steeper should be regarded as a very steep rake other than for performers trained for this work. The steeper the rake the less suitable it is for extensively choreographed movement, high heeled shoes, carrying or pushing large and/or heavy objects or extended periods of work on the rake.

ELEMENTS FOR ASSESSMENT

All of the following factors should be assessed whenever performers are being asked to work on a rake.

Movement

Movement covers not only dance. It could be normal movement, stylised movement or choreography. All of these have different implications when considering the suitability of working on a rake. The steeper the rake being considered the more restricted the range of suitable movements might be. Remaining in a stationary position for an extended period of time should also be assessed as the use of muscles when standing on a rake differs from standing or moving on a flat surface.

Surface

Whilst it may seem obvious, the steeper the rake the more grip will be required from its surface and the more predictable the surface should be. Special care should be taken with the choice of final finish and consideration given to the effects of its cleaning and maintenance. Particular attention must be given to any area where a level surface meets a rake or where two rakes meet.

Footwear

The sole of any footwear has to be compatible with the stage surface to enable sufficient grip for the rake and the activity being carried out. On a steep rake consideration should also be given to the amount of support provided by the footwear. Particular care must be given to the use of any high heel on a rake.

Costume and props

Consideration must be given to what an actor is required to wear or carry on a rake in terms of weight, freedom of movement and balance.

Access

Over and above normal considerations of safety backstage, consideration must be given to how the rake can be safely accessed. This applies not only to stage entrances but also get off treads, where particular care must be given to the point at which a sloping surface meets a flat one and especially where a scenic rake is mounted on a raked stage.

Touring

If a production is touring care must be given to the implications of "putting a rake on a rake" - as where a touring floor meets a house rake.

Breaks

If a rake of 1:20 or steeper is being used the Manager should consider the performer's need for periods of time off the rake in addition to the normal breaks. Where a steep rake is being used a significant rest time off the rake may be necessary. These periods need not be additional "Break Time" but could be for instance time working on another aspect of the production off the rake. The amount should reflect the demands being made on the performers, both as to the steepness of the rake and what they are required to do on it, but for example 5 minutes off the rake within every hour might be sufficient.

Pre-existing risk factors

Performers with pre-existing risk factors that might be exacerbated by working on a rake, for example injuries, pregnancy or a predisposition to back or knee problems, should ensure that the Manager is made aware of any such risk factor as soon as they are aware that they are required to work on a rake so that it can be taken into account.

Warming up and cooling down

The importance of the body being in a fit state to deal with strains put upon it is generally recognised. Where work is to take place on a rake exercises for both warm-up and cooling-down should be undertaken on a regular basis. It is recommended that a qualified individual be engaged to teach the performers appropriate warm up and cool down exercises. Depending on the steepness of the rake and other factors, a qualified individual may also be needed periodically to ensure that the exercises are being performed correctly.

These exercises should occur as a part of the preparation for working on the rake. Time spent so doing should count as time worked for the purposes of weekly calculations, but should not impinge on any daily or weekly rehearsal time limits. These sessions should be a minimum of five minutes in length.

Specialist Advice

Where the use of a very steep rake is being considered, specialist advice should be sought to ensure that proper provision is made for minimising risk. Such a specialist could, for example, be a physiotherapist conversant with dance/sporting injury or some other person with identifiable experience in dealing with such matters.

SUMMARY

So in general terms at 1:21 or flatter no specific steps need to be taken however if approaching that boundary it would be wise to consider the implications. At 1:12 or steeper specialist advice should be sought. Between the two all of the factors described should be addressed.

	Movement	Surface	Footwear	Costume	Access	Specialist
1:21 or flatter	✓	✓				
1:20 - 1:13	✓	✓	✓	✓	✓	
1:12 or steeper	✓	✓	✓	✓	✓	✓

APPLICABILITY

Whilst these guidelines primarily apply to performers, similar considerations apply to others – stage management – technicians – who may have to work on a rake.

The Theatre Safety Committee is a cross-industry body which monitors developments and disseminates information relating to health and safety in the theatre industry. Its members are: Association of British Theatre Technicians (ABTT), Broadcasting Entertainment Cinematograph and Theatre Union (BECTU), Equity, Independent Theatre Council (ITC), Institute of Entertainment and Arts Professionals (IEAP), Musicians' Union (MU), National Operatic and Dramatic Association (NODA), Society of London Theatre (SOLT), Stage Management Association (SMA) and Theatrical Management Association (TMA). The committee can be contacted c/o The Legal Officer, SOLT/TMA, 32 Rose Street, London WC2E 9ET.