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IF THE ROOFING CONTRACTOR HAD HIS WAY

by Ruberoid Export
Manager R. D. Clarke

ARCHITECTS are, I find, increasingly recognising the contribution that the specialised sub-contractor can make at the planning stage of a project.

The sub-contractor is not only able to draw attention to design features that would make his part of the work unnecessarily complicated and costly but can also on occasion put forward suggestions for improving the appearance or efficiency of the finished job. Most important of all are the possibilities of substantial economies which can sometimes be achieved when the sub-contractor is brought in at the design stage of the building, when not merely the substructure but even the main structure itself can be considered in the light of the weatherproofing it will be called upon to support.

Perhaps it might be helpful if I try to give the roofing contractor's point of view — that is to say, the procedures that he would like to see generally adopted in order to give him the best possible chance of doing a thoroughly efficient, trouble-free job.

It is at the design stage that the roofing contractor's problems very often start, simply because no one is looking at the drawings from his particular standpoint. In a recent issue we described a contract in West Africa where a great deal of roofing trouble was caused by the use of an unsuitable substructure of woodwool slabs nailed direct to timber purlins. Many similar examples could be cited.

As soon as a roofing contractor is asked to undertake a job, a host of questions spring to his mind. Is there anything about the location of the building or the use to which it is being put that might necessitate, say, additional expansion joints in the roofing? Is the roof design practicable from a fixing standpoint? Do special precautions

need to be taken to protect the roofing membranes from solar radiation or a corrosive atmosphere? Does the type of substructure being employed present any special weatherproofing problems? Have such aspects as insulation, roof drainage and the provision of roof-lights all been considered in relation to the main roofing operation? Is the roof to be put to any purpose other than straightforward protection of the building?

These are just some of the questions the roofing contractor would normally want answered before he could decide

on the right specification and method of application. If the drawings and specifications have gone ahead without taking all these factors into account, it may be too late to offer anything but second-best solutions by the time the roofing contractor arrives on the scene.

It is because this company has been very conscious of the need to offer specialist advice on roofing matters at an early stage that we set up our Design Service, which is backed by the long practical experience of our world-wide contracting operations and by the

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RUBEROID FOREMAN ADVISES CONTRACTORS



Further skills involving the proper application of Ruberoid specifications have been demonstrated on the new Hilton Hotel at Nicosia, Cyprus, designed by Raglan Squire and Partners of London, who have retained Jeannet & Paraskevaidis Limited, Nicosia, as main contractors. A three-layer Ruberoid built-up roofing specification is soon being applied under the supervision of Ruberoid Foreman T. Wright who travelled from England to Cyprus for this purpose.

If the Roofing Contractor had his way

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research facilities of our Development Department. This service is available to both U.K. and overseas architects and is being used today by leading designers.

The roofing contractor also has his viewpoint — and at times a very strong one — about his role during the execution of a contract. On the site the old attitude still sometimes prevails that the roofers are simply men who come along and fix two or three layers of "felt" on whatever the previous trades have provided as a substructure.

But here again the specialised nature of the materials and methods employed today by the roofing industry makes it more than ever necessary that the fixing work should be carried out to high standards — and on a sound and properly prepared substructure.

Too often, the roofer finds himself caught in a conflict between his own professional conscience, which tells him that conditions are not quite right for his purpose, and outside pressures which urge him to get on with the job and not hold up other trades. If there is any kind of penalty clause attached to the contract, the conflict can be painfully acute.

While everyone involved is anxious to see a project completed on schedule, standard of workmanship is also an important consideration. The roofing contractor feels that he should not be expected to proceed if, for example, the substructure is poorly finished or not sufficiently dried out or liable in some way to impair the efficiency of the weatherproofing. Nor does he feel happy about doing so if the building work is at the stage where he can only half-do his job or will have to undo part of it again subsequently.

In other words, the roofing contractor feels that he should, in consultation with the architect and main contractor, have some say in whether the conditions are such as to produce a sound, long-lasting, weathertight roof. Otherwise there is the danger of more haste, less speed, because sooner or later any deficiencies will have to be made good.

The roofer also considers that he has the right to ask that his work should not be exposed to unnecessary risks of damage during the completion of the project. Many a good roof is ruined by following trades. This is always liable to happen when other trades work on the roof-top after the weatherproofing has been fixed. Foot traffic over the newly laid surface, the spilling of substances injurious to the membranes, the movement of plant and materials, the leaving of piles of debris — none of this exactly puts the finishing touch to the roofer's work.

The architect can reduce these risks by more rational scheduling of the work of

the various trades and by regular site meetings. On some occasions it may even be worth while to consider the provision of a temporary protection over the completed weatherproofing.

Finally, the roofing contractor has a very real concern about how his roof is used once he has laid it. Ruberoid have always advocated regular inspection of roofs on the principle that a stitch in time saves nine, and I would like to see this procedure become more widely accepted as a normal part of roof maintenance.

To this end I would add that the client has a responsibility — in his own interests — to look after his roof and not abuse it. By abuse I mean, for example, regularly walking over part of the roof when it was not designed for the purpose; using it as a mounting platform for items of equipment or electrical installations that might weaken the adhesion or weathertight-

ness of the membranes; or, as sometimes happens, putting the building to some new use that drastically alters, say, the internal humidity conditions.

I stressed at the outset that I was putting the roofing contractor's point of view. I am only too well aware that in practice everyone from the architect downwards has to compromise at times. Cost considerations, the availability of labour, bad weather — many factors like these can upset the best laid plans. But what is important, I feel, is that the building industry should move in the direction of closer consultation between all those engaged on a project and that in particular the specialist sub-contractor should have the chance to express his views on any aspect of the job, from design to work planning, that might affect the efficiency of his service. In this way and only in this way can efficiency be achieved most economically.

TNA 200 NOW IN ACTION



Swimming pool being constructed to Olympic standards at East Kilbride, Scotland, which has been roofed with Ruberoid TNA 200 Roofing.

TNA 200, a brilliant white tough plastic roofing exclusively introduced to Britain by Ruberoid is now appearing on a variety of municipal and industrial buildings in the U.K. Probably the most important project for which it has been specified is the new Barbican scheme in the City of London.

This roofing consists of a polyvinyl fluoride film laminated to an asbestos fibre felt impregnated with neoprene. The PVF film, Tedlar®, is made by the Du Pont Company of America.

It will stand up to temperatures from -50°F to over 250°F and will not support

* Du Pont Registered Trade Mark

combustion.

TNA 200 has the exceptionally high reflectivity figure of 88 per cent which is maintained for long periods because the surface is self-cleaning and does not readily hold dust or dirt. This keeps the roof temperature close to the ambient, and results in more comfortable working conditions and less thermal movement in the roof substructures.

TNA 200 Roofing is fixed by conventional methods employing hot bitumen and incorporating appropriate Ruberoid underlayers according to the substructure.

MORE FACTS ABOUT HYLOAD



The Central Electricity Generating Board's new power station at Ratcliffe-on-Soar, Nottinghamshire where more than 5,000 sq. yards of Hyload dampcourse have been used.

HYLOAD Pitch Polymer Dampcourse is now available in metric as well as traditional British measurements, the alternatives being 15 metres x 1 metre or 16 yards x 1 yard.

Depending upon the phase of building operations, occasions can arise where adhesion is required of Hyload to asphalt or of asphalt to Hyload. In the first case the most practical method is to employ hot bitumen at the lap. In the second case, where asphalt is required to adhere to Hyload, it is important that the temperature of the asphalt at the time of application should be in accordance with the requirements of the British Standards for asphalt at between 200° and 220°C. Tests by our Development Department show that adhesion at these temperatures is not likely to fall below 2,000 lb. per square foot.

Another method of obtaining an effective bond at side and end laps which

will dispense with the need to use hot bitumen is by means of a solvent welding process, the most common solvent for this type of application being Tetra Hydra Furan. This method of sealing the laps was adopted by the British Antarctic Survey with Hyload 75 roofing on their buildings at Halley Bay.

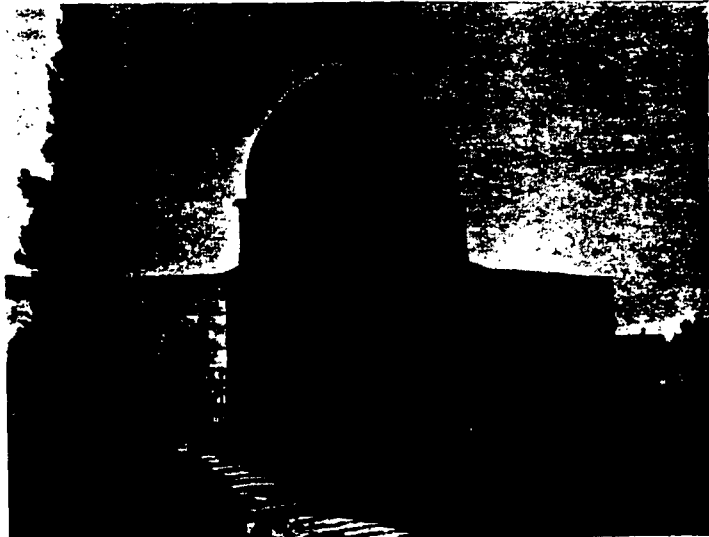
RUBEROID CHOSEN FOR MAJOR CITY DEVELOPMENT

ARCHITECTS and designers from all over the world are watching with interest the Barbican Development, an enterprising project by the Greater London Council which will change the face of the City of London.

After lengthy negotiations with the Council's architects, Ruberoid has been nominated for roofing on the Development. This major contract, which will take 3/4 years to complete, involves six different Ruberoid specifications which include the use of approximately 10,000 square yards of TNA 200 and 24,000 square yards of Hyload 75 Roofing.

In view of the international interest in the Barbican Development "Round the World" will, from time to time, publish progress reports of work on this project.

THE DOME OF THE ROCK



IN THE COURSE of extensive restoration more than 5,000 square metres of Ruberoid products have been used for waterproofing the Dome of the Rock, Mount Moriah, Jerusalem — one of the most famous historic buildings in the Middle East.

Moreover, Ruberoid lead-lined dampcourse is currently being used for the

renovation of the ancient Al Aqsa Mosque which is adjacent.

The work is supervised by Abdul-Minim Abdul Wahab, consultant architects and engineers to the Department of Antiquities of the Hashemite Kingdom of Jordan. The main contractor is Bin-Ladin of Saudi Arabia.

RUBEROID COMPOUND

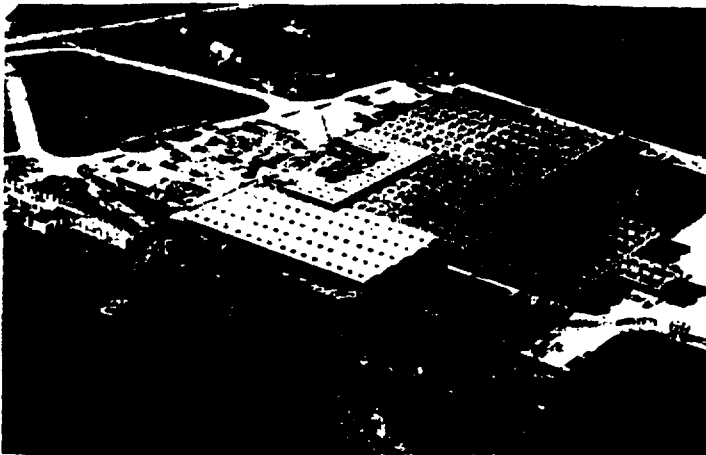
RUBEROID has always stressed the importance of using an appropriate grade of bonding bitumen compound for the bonding of built-up roofings. This vital factor has been appreciated in industry and by the British Standards Institution in particular; the Institution's recently published British Standard 3940:1963 "Classification for Adhesive Based on Bitumen or Coal Tar" Type 8 covering blown (oxidised) grades of bitumen for bonding layers of roofing confirms that Ruberoid Compound complies. The new British Standard does however state that the roofing contractor will advise on the actual grade of bitumen to be used depending on the type of structure and situation. As in the past Ruberoid will continue to make their recommendations on such matters.

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Ruberoid Used For Unique Scottish Venture



An aerial view of the Stirling Livestock Market which is rapidly nearing completion.

RUBERVENT PREVENTS BLISTERING

A QUOTE from a digest issued by the British Building Research Station gives some indication of the time required to dry out wet screeds. It reads:—

"The difficulty of drying out wet screeds is illustrated by the behaviour of a 3 inch aerated screed exposed at Garston Building Research Station at a slope of 1 in 60. The dry screed picked up 1.7 gallons of rain water per square yard in 4 wet days. Of these 1.7 gallons, 0.2 gallons could be drained off. Half the remaining water dried out when the surface of the screed was freely ventilated but shielded from further rain in 8 days of excellent summer weather or about 48 days of normal winter weather. Complete drying needed 36 good summer days or 180 winter days".

By specifying the Rubervent underlay system which isolates and ventilates built-up roofing, the pressure build-up from drying screeds which leads to blistering is eliminated.

Ruberoid Jointing Materials

THE manufacture of Crocel Sealing and Jointing Compounds and C. & E. Jointing has been discontinued and these Ruberoid products will no longer be available.

RUBEROID products have been widely used in the construction of a unique project at Stirling in Scotland. Built by Livestock Marts Limited, it is predominantly a cattle market with accommodation for 3,000 cattle, 15,000 sheep, 1,000 pigs and 500 calves, but the same 21 acre site also houses a restaurant, banks, shops, hairdressers, a service station and parking for 1,000 cars so that farmers and their families attending the market may follow a variety of pursuits without leaving the one location.

Attractively sited on the banks of the River Forth, the location has a super-structure, mainly of barrel vaulted roofs which, when combined with the flat roofs over the shopping area, has a total of 19,000 square yards of roof area. This area was given to Ruberoid to waterproof employing Rubervent Underlay with Green Glasphalt Mineral Surfaced Roofing and Ruberglas Roofing for 6,500 feet of gutter. Hyload Dampcourse was used for flashing over expansion joints. The architects for the project were Alex Strang and Associates, A/A.R.I.A.S., A/A.R.I.B.A., A.R.I.C.S.



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